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## Group $C_1$

### 1. I

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$CCl_4$. Carbon tetrachloride, absorption spectra of diphenylthiocarbazone (dithizone) in, 475; photoreactions with p-dianisylmercury, 542; photoreactions with dimethylmercury, 545; photoreactions with β-dinaphthylmercury, 2119; spectophotometric investigation of the interaction of halogens dissolved in, 795.

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$CHCl_3$. Chloroform, photoreactions with β-dinaphthylmercury, 2119; photoreactions with dimethylmercury, 545; photoreactions with p-dianisylmercury, 542.

$CH_2O$. Formaldehyde, condensation with aldehydes and ketones, 1849; inhibiting effect on acidic corrosion, 1889; kinetics, mechanism of reaction, in aqueous acid solutions, 485; production from methane, 1809; reaction with sodium dialkylphosphite, 709.

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$CH_3I$. Methyl iodide, photoreactions with dimethylmercury, 545; reaction with sodium dialkylphosphite, 315.

$CH_4O$. Methanol, condensation with acetone, 691; condensation with methylethyl ketone, 697; condensation with zinc chloride, 1172; formation from formaldehyde, 485; photoreaction with p-dianisylmercury, 542; photoreaction with dimethylmercury, 544; reaction of methyl lactolide of methylbenzoylcarbinol with, 1201; reaction with vinylacetylenic α-oxides, 2015.

$CH_5N$. Methylamine, reaction with methoxyketones, 1709; reaction with 4-piperidones, 685.

$CH_5N_3$. Guanidine, acetylation, 605.

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$CH_2PCl_3$. Chloromethyldichlorophosphine, preparation, properties, action of chlorine, 1576.

$CH_2SbCl_3$. Chloromethyldichlorostibine, preparation, properties, reaction with diazomethane, 1570.

$CH_2SiBr_4$. Bromomethyltribromosilane, preparation, properties, 1824.

$CH_2SiCl_4$. Chloromethyltrichlorosilane, preparation, properties, 1822.

$CH_2SnBr_4$. Bromomethyltribromotin, preparation, properties, 1829.

$CH_2SnCl_4$. Chloromethyltrichlorotin, preparation, properites, 1828.

$CH_3ON$. Formamide, reaction with glycidol ethers, 985.

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2) Thiourea, preparation, 1280.

### 1. IV

$CH_2OBiCl$. Product of reaction of diazomethane with bismuth trichloride, formation, properties, action of HCl, 1573.

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$CH_3OPCl_2$. Di-acid chloride of chloromethylphosphinic acid, preparation, properties, 1577.

$CH_3OPCl_2$. Methyl dichlorophosphate, preparation, properties, 1576.

$CH_3O_2PCl_2$. Methyl ester of dichlorophosphoric acid, preparation, properties, 1581.

$CH_4O_2PBr$. Bromomethylphosphinic acid, preparation, properties, derivatives, 1581.

$CH_4O_2PCl_3$. Chloromethylphosphinic acid, preparation, properties, formation of aniline salt, 1577.

## Group $C_2$

### 2. I

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$C_2Cl_6$. Hexachloroethane, synthesis of hydrocarbons by the action of, upon organomagnesium compounds, 833.

### 2. II

$C_2H_2O$. Ketene, use as an acetylating agent, (for ethanolamines), 715.

$C_2H_2O_4$. Oxalic acid, formation from nitrogen dioxide and benzene, 1373.

$C_2H_4O$. 1) Acetaldehyde, bromination with dioxan: dibromide, 1640; condensation with acetone, 1003; inhibiting action in acidic corrosion, 1889; ketonization, 1371; reaction with sodium dialkylphosphite, 709.
2) Ethylene oxide, reaction with dimethylolurea, 1861; reaction with hydrogen sulfide, to form thiophene, 2243.

$C_2H_4O_2$. 1) Acetic acid, catalytic conversion, 1303; electrical conductivity of solutions in isooctane, 1807; reaction with boron fluoride etherate, 1819; reaction with dimethylmercury, 1182.
2) Methyl formate, formation from formaldehyde in aqueous acid solutions, 485.

$C_2H_4O_3$. Glycolic acid, reaction of esters, with phosphorus halides, 977.

$C_2H_4Br_2$. Ethylene bromide, reaction with sodium di-β-methoxyethylphosphite, 312.

$C_2H_5I$. Ethyl iodide, reaction with sodium dialkylphosphite, 315.

$C_2H_6O$. Ethyl alcohol, kinetics of hydrogenation of cinnamic acid in, 623; condensation with acetone, 697; reaction with benzene, 1020; dehydrogenation, ketonization, thermodynamics of, 1369; polarographic characteristics of cadmium, lead and thallium in solutions of indifferent electrolytes, 1757; use in determination of dissociation constants of complexions, 1973.

$C_2H_6Hg$. Dimethylmercury, photoreactions of, 543; preparation, reaction with phenols, organic acids, decomposition, 1181.

$C_2H_6S$. Dimethyl sulfide, preparation, properties, 758.

$C_2H_7N$. 1) Ethylamine, reaction with piperidones, 683; reaction with furanidine, 915; reaction with methoxyketones, 1709.

2) Dimethylamine, reaction with methoxyketones, 1833.

$C_2H_8Br_2$. Dibromobutane, preparation, 917.

2. III

$C_2H_2O_2Cl_2$. Dichloroacetic acid, reaction with the methyl lactolide of methylbenzoylcarbinol, 1203.

$C_2H_3OBr$. Acetyl bromide, reaction with sodium di-β-methoxyethylphosphite, 312.

$C_2H_3OCl$. Acetyl chloride, use in intramolecular condensation of α-hydroxy carboxylic acids, 759.

$C_2H_3O_2Ag$. Silver acetate, formation, 1847; formation, 2111; formation, 2199.

$C_2H_3O_2Br$. Bromoacetic acid, reaction with boron fluoride etherate, 1819.

$C_2H_3O_2Cl$. Chloroacetic acid, formation, 1563; formation, 1566; reaction with boron fluoride etherate, 1819.

$C_2H_4FCl$. 1,2-Chlorofluoroethane, density, specific volume, coefficient of expansion, viscosity, surface tension, factor of association, vapor tension, boiling point, heat of vaporization, critical volume, critical temperature, critical pressure, 1157.

$C_2H_4OCl$. Chloroacetamide, preparation, properties, 1395; effect of temperature on polarographic reduction of, 1799.

$C_2H_4PCl_3$. α-Chloroethyldichlorophosphine, preparation, properties, action of chlorine, 1578.

$C_2H_4PCl_5$. Phosphorus α-chloroethyltetrachloride, preparation, 1579.

$C_2H_4SiBr_4$. Di-(bromomethyl)-dibromosilane, preparation, properties, formation of tribromo-compound, 1824.

$C_2H_4SiCl_4$. 1) Di-(chloromethyl)-dichlorosilane, preparation, properties, action of anhydrous copper sulfate, 1822.

2) α-Chloroethyltrichlorosilane, preparation, properties, 1823.

$C_2H_4SnBr_4$. Di-(bromomethyl)-dibromotin, preparation, properties, 1830.

$C_2H_4SnCl_4$. 1) Di-(chloromethyl)-dichlorotin, preparation, properties, 1828.

2) α-Chloroethyl-trichlorotin, preparation, properties, 1830.

$C_2H_5ON$. Acetamide, reactions of organomercury compounds with, 701; reactions of glycidol ethers with, 985.

$C_2H_5O_2N$. Urethane (methyl ester of carbamic acid), preparation, 1589.

$C_2H_5SiCl_3$. Methyl-(chloromethyl)-dichlorosilane, preparation, properties, 1823.

$C_2H_6N_2S$. Methylisothiourea, preparation, formation of dimethyl sulfate, 1280.

$C_2H_6O_4S$. Dimethyl sulfate, methylating diene phenol with, 679; methylating dimethylbutyl-p-hydroxyphenylmethane, with, 680.

2. IV

$C_2H_4OPCl_3$. Di-acid chloride of α-chloroethylphosphinic acid, preparation, properties, formation of anilide, 1579.

$C_2H_6O_2Co_2Cl_4$. Reaction product of diphenylmercury with ethylcellosolve and cobaltous chloride, 548.

$C_2H_6O_3PCl_3$. Ethyl ester of dichlorophosphoric acid, preparation, properties, 1581.

$C_2H_6O_3PCl$. α-Chloroethylphosphinic acid, preparation, properties, 1579.

$C_2H_7ON_2Cl$. Aminoacetamide hydrochloride, preparation, 2080.

$C_2H_6O_2N_2S$. Ethylsulfamide, preparation, properties, solubility, 2094.

$C_2H_6O_4N_2S_2$. 3-Ethylimidosulfamide, preparation, properties, solubility, saponification, 2093.

Group $C_3$

3. I

$C_3H_6$. Propylene, formation in the contact synthesis of divinyl from alcohol, 1303.

3. II

$C_3H_3N$. Acrylonitrile, use in synthesis of 3-phenyl- and 3,4-diphenylpiperidine, 719; cyanoethylation products of dihydric phenols with, 1685; copolymer with butadiene, structure, 1851; cyanoethylation, 2027.

$C_3H_4O$. Acrolein, addition of dialkylphosphorous acids to, 533; condensation with dienes, 658; condensation with isoprene, 659; sulfonation of, 2191.

$C_3H_5Br$. Allyl bromide, reaction with sodium diethylphosphite, 2107.

$C_3H_5Cl$. Allyl chloride, reaction with ethyl diazoacetate, 1393.

$C_3H_5I$. Allyl iodide, reaction with sodium dialkylphosphite, 315.

$C_3H_6Br_2$. 1,2-Dibromopropane, preparation, properties, 918.

$C_3H_6O$. 1) Acetone, condensation with methanol, 691; condensation with ethyl alcohol, acetylacetone, 697; reaction with sodium dialkylphosphite and dialkylphosphorous acids, 709; condensation with acetic anhydride, 1003; use in preparation of divinyl by S. V. Lebedev method, 1303; bromination with dioxan dibromide, 1641; cyclization of phenylhydrazone, 2261.

2) Propionaldehyde, bromination with dioxan dibromide, 1640; inhibiting action on acidic corrosion, 1889.

3) Propylene oxide, reaction with hydrogen sulfide to form 2,4-dimethylthiophene, 2244.

$C_3H_6O_2$. 1) Methyl acetate, reaction with diphenylmercury, 1185.

2) Ethyl formate, reaction with magnesium-isopropyl bromide, 1991.

3) Glycidol, reaction of ethers with acid amides, 985.

4) Propionic acid, electrical conductivity of isooctane solutions of, 1807.

$C_3H_6O_3$. Product of pyrolysis of dimethyl pyrocarbonate, 1588.

$C_3H_7I$. 1) Propyl iodide, reaction with sodium dialkylphosphite, 315.

2) Isopropyl iodide, reaction with sodium dialkylphosphite, 315.

$C_3H_8O$. 1) Isopropyl alcohol, reaction with benzene, 1020.

2) Methylal, formation from formaldehyde, 485.

$C_3H_9N$. Propylamine, reaction with methoxyketones, 1709.

3. III

$C_3H_4O_4S$. Acrolein sulfonic acid, preparation, salts, 2191.

$C_3H_5OBr$. 1) Bromoacetone, preparation 1641.

2) α-Bromopropionaldehyde, preparation, 1640.

$C_3H_5OCl$. α-Epichlorohydrin, reaction with alcohols, 986; reaction with triethyl phosphite, 1244.

$C_3H_5OI$. α-Epiiodohydrin, reaction with triethyl phosphite, 1244.

$C_3H_5O_2Ag$. Silver propionate, formation, 1215.

$C_3H_5O_2Br$. β-Bromopropionic acid, preparation of ethyl ester, 1852.

$C_3H_5O_2Cl$. Ethyl chlorocarbonate, reaction with organomagnesium compounds, 1385.

$C_3H_5O_2Na$. Sodium propionate, reaction with γ,γ-dimethylallyl chloride, 674.

$C_3H_6O_2Hg$. Product of reaction of dimethylmercury and acetic acid, 1182.

$C_3H_6SbCl_3$. Tri-(chloromethyl)-stibine, preparation, properties, action of bromine, 1571.

$C_3H_6SiBr_4$. Tri-(bromomethyl)-bromosilane, preparation, properties, formation of oxide, 1824.

$C_3H_6SiCl_4$. Tri-(chloromethyl)-chlorosilane, preparation, properties, 1823.

$C_3H_6SnCl_4$. Tri-(chloromethyl)-chlorotin, preparation, properties, 1829.

$C_3H_7BrMg$. Isopropylmagnesium bromide, reaction with ethyl formate and the chloroanhydride of isovaleric acid, 1991; reaction with methylmethacrylate, 2023.

$C_3H_7OBr$. Product of reaction of acetyl bromide and di-β-methoxyethylphosphite preparation, properties, 312.

$C_3H_7OCl$. 1) α-Chloroethylmethyl ether, addition to butadiene, 835; reaction with organomagnesium compounds, 1649.

2) Monochloromethylethyl ether, reaction with organomagnesium compounds, 1647.

$C_3H_7O_2N$. β-Alanine, preparation, properties, 1673.

$C_3H_7O_4P$. α-Phosphono-β,γ-epoxypropane, preparation, 1243.

$C_3H_7O_5P$. β-Phosphopropionic acid, preparation, 539.

$C_3H_8O_2N_2$. Dimethylolurea, reaction with ethylene oxide, 1861.

3. IV

$C_3H_3O_4SK$. Potassium salt of acrolein sulfoacid, preparation, 2193.

$C_3H_6OPCl_3$. Trichloromethylphosphine oxide, preparation, properties, 1582.

$C_3H_6SbBr_2Cl_3$. Tri-(chloromethyl)-dibromostibine, preparation, properties, 1571.

$C_3H_7O_2NS$. Cystiene, conversion into derivatives of thiazolidine-4-carboxylic acid, 1077; reaction with 4-ethoxymethylen-2-phenyl-5-oxazolone, 2251.

$C_3H_{10}ON_2Cl$. Aminoacetiminoethyl ether, dihydrochloride, reaction with pyridine, 2086.

$C_3H_{10}ON_2Cl_2$. Aminoacetiminoethyl ether dihydrochloride, preparation, properties, 2079.

Group $C_4$

4. I

$C_4H_6$. Butadiene, configuration of crystalline bromides of, 663; addition of α-halogen ethers, 835; reaction with acrylonitrile, 1851.

$C_4H_8$. Isobutylene, preparation, reaction with nitrosyl chloride, 2175.

4. II

$C_4H_4Cl_2$. 1,2-Dichloro-but-1,3-dien, preparation, properties, 1564.

$C_4H_4O_4$. 1) Fumaric acid, effect of temperature on polarographic reduction of, 1799.

2) Maleic acid, effect of temperature on polarographic reduction of, 1799.

$C_4H_4S$. Thiophene, preparation of compounds of, 2243.

$C_4H_5Cl$. Chloroprene, action of chloroamides on, 1557.

$C_4H_6Cl_2$. Chloropsene dichloride, preparation, properties, 1562.

$C_4H_6Br_2$. Butadiene dibromide, configuration of, 663.

$C_4H_6Br_4$. 1) Tetrabromobutadiene, configuration, 663.

2) 1,2,3,4-Tetrabromobutane, preparation, properties, 917.

$C_4H_6O$. 1) Crotonaldehyde, addition of dialkylphosphorous acids to, 534; sulfonation of, 2191.

2) Methylvinyl ketone, condensation with dienes, 658; condensation with piperylene, 658.

$C_4H_6O_2$. 1) Methacrylic acid, see $C_5H_8O_2$, methylmethacrylate.

2) Methyl acrylate, addition of dialkylphosphorous acids to, 538.

3) Vinyl acetate, addition of dialkylphosphorous acids to, 539.

4) Butyrolactone, conversion to heterocyclic compounds, 573.

5) Crotonic acid, addition of dialkylphosphorous acids to ethyl ether, 1189.

6) 1,4-Butynediol, hydrogenation, acetate, 1445.

7) Diacetyl, polarographic investigation of, 2161.

8) Ethylglyoxal, polarographic investigation of, 2161.

$C_4H_6O_3$. 1) Acetic anhydride, condensation with acetone, 1003; reaction with ketones, 1205.

2) Diacetyl ether, use in intramolecular condensation of $\alpha$-hydroxy carboxylic acids, 759.

$C_4H_6O_4$. Dimethyl oxalate, reaction with di-ortho-substituted aryl magnesium halides, 1407.

$C_4H_6O_5$. Dimethyl pyrocarbonate, preparation, properties, pyrolysis, action of ammonia and carbon dioxide, aniline, hydrolysis, 1588.

$C_4H_7Cl$. 1) 1-Chloro-2-butene, reaction with sodium diethylphosphite, 2110.

2) 3-Chloro-1-butene, reaction with sodium diethylphosphite, 2110.

$C_4H_8Br_2$. 1,4-Dibromobutane, preparation, reaction with benzyl cyanide, 2247.

$C_4H_8O$. 1) Butyraldehyde, reaction with sodium dialkylphosphite, and dialkylphosphorous acids, 709; bromination with dioxan dibromide, 1640; effect of temperature on polarographic reduction of, 7199; inhibiting action on acidic corrosion, 1889.

2) Furanidine, catalytic dehydration with secondary amines, 915.

3) Isobutyraldehyde, bromination with dioxan dibromide, 1640; inhibiting action on acidic corrosion, 1889.

4) Methylethyl ketone, condensation with homomesitones, 249; absorption spectra of diphenylthiocarbazone (dithizone) in, 475; formation from methanol and acetone, 691; condensation with methanol, 697; reaction with hippuric acid, 1923; phenylhydrazone, cyclization, 2259.

$C_4H_8O_2$. 1) Butyric acid, electrical conductivity of isooctane solutions of, 1807.

2) Propionylcarbinol, polarographic investigation, 2151.

3) Methylacetylcarbinol, polarographic investigation, 2151.

4) Ethyl acetate, catalytic conversion, 1304; ketonization, 1371; preparation, properties, 1820; distribution coefficient of pentavalent vanadium in mixtures with HCl, 2138.

$C_4H_8O_3$. Ethoxyacetic acid, formation, 1566.

$C_4H_9N$. 1-Amino-2-methylpropene-2, preparation, properties, formation of picrate, hydrochloride, 2179.

$C_4H_{10}Hg$. Diethylmercury, reaction with acid amides, 701.

$C_4H_{10}O$. 1) Butyl alcohol, condensation with phenol, 1015; alkylation of benzene, 1019; reaction with benzene, 1020; reaction with $\alpha$-oxides of the vinylacetylene series, 2013.

2) Isobutyl alcohol, alkylation of benzene, 1019; reaction with $\alpha$-oxides of the vinylacetylene series, 2013.

3) Diethyl ether, coefficient of distribution of pentavalent vanadium in mixtures with HCl, 2137.

$C_4H_{11}N$. 1) Diethylamine, reaction of $\gamma,\gamma$-dimethylallyl chloride with, 672; reaction with 4-piperidones, 686; hydrolysis, 917.

2) Diethanolamine, acetylation with ketene, 715.

## 4. III

$C_4H_5OCl$. Unsaturated chloroketone, from chloroprene, formation, properties, p-nitrophenylhydrazone, action of bromine, 1564.

$C_4H_5O_2Ag$. Ag salt of acid obtained by ozonization of cyclopropylacetylene, 285.

$C_4H_6OCl_2$. Chloroprene chlorohydrin, preparation, properties, acetylation, bromination, oxidation, action of alkali, 1561.

$C_4H_6OS$. Thiophanone-2, preparation, properties, reduction, 574.

$C_4H_6O_2N_2$. Ethyl diazoacetate, reaction with allyl chloride, 1393; reaction with allyl acetate, 1399.

$C_4H_6O_4S$. Crotonic sulfoacid, preparation, properties, salts, 2191.

$C_4H_7OBr$. 1) $\alpha$-Bromobutyric aldehyde, preparation, 1640.

2) $\alpha$-Bromoisobutyric aldehyde, preparation, 1640.

$C_4H_7OCl$. 1-Chlorobutanone-2, polarographic investigation, 2151; 3-chlorobutanone-2, polarographic investigation, 2151.

$C_4H_7ON$. Pyrrolidone-2, preparation, properties, 575.

$C_4H_7O_2Br$. Ethyl bromoacetate, preparation, properties, 1397.

$C_4H_7O_2Cl$. 1) Ethyl chloroacetate, preparation, properties, 1395.
2) Ethyl ester of monochloroacetic acid, preparation, properties, 1820.
$C_4H_7O_2N$. Diacetamide, reactions of organomercury compounds with, 701.
$C_4H_7O_2Na$. Sodium butyrate, reaction with γ,γ-dimethylallyl chloride, 674.
$C_4H_8AsCl_3$. Di-(α-chloroethyl)-chloroarsine, preparation, properties, 1572.
$C_4H_8OS$. $S^{35}$-Methionine, microsynthesis of, 1279.
$C_4H_8O_2Br_2$. Dioxan dibromide, bromination with, preparation, 1635; use for bromination of aldehydes and ketones, 1639.
$C_4H_8O_2Hg$. Product of reaction of dimethylmercury and propionic acid, 1182.
$C_4H_8O_2N_2$. Acetylmethylurea, reaction with ethyl cyanacetate, 909.
$C_4H_8O_3N_2$. 1-Nitro-2-nitroso-2-methylpropane, preparation| hydrogenation, 2176.
$C_4H_8SbCl_3$. Di-(α-chloroethyl)-chloroantimony, preparation, properties, oxidation, 1572.
$C_4H_8SnBr_4$. Tetra-(bromomethyl)-tin, preparation, properties, 1830.
$C_4H_8SnCl_4$. 1) Tetra-(chloromethyl)-tin, preparation, properties, 1829.
2) Di-(α-chloroethyl)-dichlorotin, preparation, properties, 1830.
$C_4H_9OCl$. α-Chloroethyl ether, addition to butadiene, 839; reaction with organomagnesium compounds, 1643.
$C_4H_9O_2N$. α-Hydroxyisobutyric aldoxime, preparation, properties, 2177.
$C_4H_9O_3N$. α-Amino-β-hydroxybutyric acid, preparation, 2066.
$C_4H_9O_5P$. β-Phosphonobutyric acid, preparation, properties, 1191; preparation, 2106.
$C_4H_{11}ON$. 1-Amino-2-methyl-2-methylpropanol-2, preparation, properties, 2178.
$C_4H_{11}O_3N$. Diethanolamine, acetylation with ketene, 715.
$C_4H_{11}O_3P$. Diethylphosphorous acid, salts, reactions, 315; addition to unsaturated compounds, 525; addition to unsaturated compounds, 528, 533, 539; reaction with aldehydes and ketones, 712; action of lithium halides on, 969.
$C_4H_{13}O_3N$. Triethanolamine, acetylation with ketene, 715.

4. IV

$C_4H_4OCl_2Br_2$. Ketone, (oxidation product of chloroprene chlorohydrin dibromide), preparation formation of p-nitrophenylhydrazone, 1562.
$C_4H_5O_3NS$. Pyrrolesulfonic-2 acid, polarographic investigation of, 921.
$C_4H_5O_4SK$. Potassium salt of crotonic sulfoacid, preparation, 2193.
$C_4H_6OCl_2Br_2$. Dibromide of chloroprene chlorohydrin, preparation, 1562.
$C_4H_7OSI$. 2-Iodothioethyl ester of acetic acid, preparation, properties, 327.
$C_4H_7O_2NS$. Thiazolidine-4-carboxylic acid, preparation, properties and reactions of derivatives of, 887; preparation, properties, reactions, of derivatives of, 1077, 1909, 2251.
$C_4H_8OCl_2P$. Acid chloride of α-chlorobutylphosphinic acid, preparation, properties, 1580.
$C_4H_8SnOCl_2$. Di-(α-chloroethyl)-tin oxide, preparation, properties, 1831.
$C_4H_8OPCl_2$. Acid chloride of α-chlorobutylphosphinic acid, preparation, properties, 1580.
$C_4H_8O_2Cl_2Sb$. Dichloroethylstibianic acid, preparation, properties, 1572.
$C_4H_8O_2PCl_2$. Di-(α-chloroethyl)phosphinic acid, preparation, properties, formation of aniline salt, 1582.
$C_4H_{10}O_2ClP$. Acid chloride of diethyl phosphorous acid, alkylation of amines with, 2095.
$C_4H_{10}O_3PLi$. 1) Product of reaction of lithium bromide and the ethyl ester of phosphorous acid, formation, 969.
2) Product of reaction of lithium chloride and the ethyl ester of phosphorous acid, formation, 970.
$C_4H_{10}O_3PNa$. Sodium diethylphosphite, reaction with iodine derivatives, 315.
$C_4H_{11}ON_2Cl$. 1) Dimethylaminoacetamide hydrochloride, formation, 2080.
2) Aminoisobutyramide hydrochloride formation, properties, 2089.
$C_4H_{12}ON_2Cl_2$. Alanineiminomethyl ether dihydrochloride, preparation, solubility, 2082.
$C_4H_{17}O_2Br_3N$. Bromination compound of product formed by distilling in vacuo N-propanolbutyoxyacetamide, 988.

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$C_4H_9O_3BrPNa$. Product of reaction of sodium diethylphosphite on ethylene bromide, 313.

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$C_5H_4$. Cyclopropylacetylene, preparation, properties, Raman spectra, 246.
$C_5H_8$. 1) Cyclopentene, action of aluminum chloride, 1583.
2) Piperylene (trans) preparation, Raman spectrum, 261.
3) Vinylcyclopropane, preparation, Raman spectrum, ozonolysis, 264.
$C_5H_8$ Cyclopropylacetylene, preparation, properties, Raman spectrum, ozonization, 245.
$C_5H_{10}$. 1) Trimethylethylene, preparation, reaction with nitrosyl chloride, 2167.
2) 2-Methylbutene-2, aromatization with heptane, 828; reaction with nitrosyl chloride, 2167.

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$C_5H_5N$. Pyridine, physicochemical analysis of nitrophenol interaction, 2143.

$C_5H_6N_2$. 1) 2-Amino and 4-aminopyridine, absorption spectra, tautomerism, 1253.

2) α-Aminopyridines, alkylation with dialkylphosphoryl chlorides, 2095.

$C_5H_6O_2$. Lactone of cis-2-(hydroxymethyl)-cyclopropane-1,2-dicarboxylic acid, preparation, properties, action of KOH, Raman spectrum, oxidation, 1404.

$C_5H_6O_4$. 1) Trans-cyclopropane-1,2-dicarboxylic acid, preparation, 1397, -1,2-dicarboxylic acid, preparation, 1404.

2) cis-Cyclopropane-1,2-dicarboxylic acid, formation, 1405.

$C_5H_8Br_2$. Vinylcyclopropane bromide, preparation, properties, Raman spectrum, 244.

$C_5H_8Cl_2$. α,α-Dichloroethylcyclopropane, preparation, properties, Raman spectrum, splitting off HCl, 246.

$C_5H_8O$. 1) Allenic ether, formation, properties, 1564.

2) Cyclopentanone, reaction with dialkylphosphorous acids, 712.

3) Dimethylacetylenylcarbinol, hydrogenation, 1983.

4) Ethylideneacetone, reaction with dialkylphosphorous acids, 526.

5) 2-Methoxy-1,3-butadiene, diene condensation with $\Delta^4$-cyclohexen-6-one, 515.

6) Methyl ether of butadiene-1,2-ol-4, 1560.

$C_5H_8O_2$. 1) Acetylacetone, condensation with acetone, 697.

2) Allyl acetate, condensation with diphenyldiazomethane and ethyl diazoacetate, 1399.

3) Methyl methacrylate, reaction with isopropylmagnesium bromide, 2023.

$C_5H_8O_3$. 2-(Hydroxymethyl)-cyclopropane-1-carboxylic acid, preparation, formation of silver salt, 1397.

$C_5H_8O_4$. Methylene diacetate, formation, 2116.

$C_5H_8S$. $\Delta^3$-Dihydrothiopyran, preparation, properties, $HgCl_2$ compound, 754.

$C_5H_9Br$. 1) 5-Bromopentene-2, formation, 259.

2) α-Bromoethylcyclopropane, preparation, properties, Raman spectrum, structure, 262.

$C_5H_9Cl$. 1) α-Chloroethylcyclopropane, preparation, properties, Raman spectrum, splitting off HCl, 263.

2) γ,γ-Dimethylallylchloride, exchange reactions with amines, potassium cyanide, and salts of organic acids, 671.

$C_5H_{10}Cl_2$. Reaction product of trimethylethylene and nitrosyl chloride, preparation, properties, 2170.

$C_5H_{10}O$. 1) Methylcyclopropylcarbinol, reactions with $PCl_3$ and $PBr_3$, 259.

2) α,α- and γ,γ-Dimethylallyl alcohol, formation, 674.

3) Diethyl ketone, formation from methanol and acetone, 691.

4) Isovaleraldehyde, bromination with dioxan dibromide, 1640.

$C_5H_{10}O_2$. 1) Tetrahydrofurfuryl alcohol, conversion into $\Delta^3$-dihydrothiopyran, 751.

2) Isovaleric acid, reaction with dimethylmercury, 1183.

3) Valeric acid, electrical conductivity of isooctane solutions of, 1807.

$C_5H_{10}O_3$. n-Propyl ester of glycolic acid, preparation, properties, reaction with dimethylaniline and dipropoxychlorophosphine, 979.

$C_5H_{10}O_5$. d-Arabinose, reaction with 3,4-dimethylaniline, 1937.

$C_5H_{11}N$. 1) Piperidine, reaction of γ,γ-dimethylallyl chloride with, 673; action of sodium diethylphosphite and triethyl phosphite on some halogen derivatives of, 1247; reaction with methoxy ketones, 1833.

2) 2-Methyl-3-aminobutene-1, preparation, properties, formation of hydrochloride, picrate, 2173.

$C_5H_{12}O$. Isoamyl alcohol, absorption spectra of diphenylthiocarbazone (dithizone) in, 475; absorption spectra and instability constants of salts of dithizone in, 479.

$C_5H_{13}N$. 2-Methyl-3-aminobutane, hydrogenation product of 2-methyl-buten -1-one-3- oxime, formation, properties, hydrochloride, 2172.

5. III

$C_5H_4NBr$. α-Bromopyridine, reaction with sodium diethylphosphite, 1248.

$C_5H_4NI$. α-Iodopyridine, reaction with sodium diethylphosphite, 1248.

$C_5H_7O_3Ag$. Silver salt of 2-(hydroxymethyl)-cyclopropane-1-carboxylic acid, formation, 1397.

$C_5H_7O_4K$. Potassium malonate, preparation, properties, 784.

$C_5H_7O_4P$. α-Furfurylphosphinic acid, preparation, ethyl ester, 1242.

$C_5H_8OBr_2$. α,β-Dibromotetrahydropyran, reaction with sodium diethylphosphite, 1244.

$C_5H_8OCl_2$. Chloroprene chloroether, preparation, properties, 1563.

$C_5H_8O_3N_2$. Diacetylurea, preparation analysis, 607.

$C_5H_9ON$. 1) 2-Methylbuten -1-one-3-oxime, preparation, properties, solubility, 2171.

2) Product of reaction of 2-methyl-2-chlorobutanone-3 oxime and sodium bicarbonate and calcium carbonate, formation, properties, 2172.

$C_5H_9O_2Ag$. Silver salt of saponification product of reaction product of isopropylmagnesium bromide and the chloroanhydride of isovalerolactone, 1992.

$C_5H_9O_2Br$. Ethyl ester of β-bromopropionic acid, preparation, 1852.

$C_5H_9O_2N_3$. Diacetylguanidine, preparation, formation of picrate, conversion to monoacetylguanidine acetate, 606.

$C_5H_9O_3Ag$. Silver salt of acid obtained by removal of sulfur from ethyl α-mercapto-β-hydroxyisovalerate, 1621.

$C_5H_{10}OS$. Tetrahydrofurfurylthiol, preparation, properties, conversion to $\Delta^2$-dihydrothiopyran, 753.

$C_5H_{10}SnCl_4$. Chloromethyl-di-(α-chloroethyl)-chlorotin, preparation, properties, 1831.

$C_5H_{11}N_3O$. Semicarbazone of methyl ethyl ketone, formation, 1005.

$C_5H_{11}O_2N$. 1) Reduction product of α-hydroxy-β-aminoisovaleric acid, formation, 1618.

2) Oxime of 2-methylbutanol-1-one-3, preparation, hydrogenation, 2173.

3) α-Methoxyisobutyric aldoxime, preparation, properties, hydrogenation, 2177.

$C_5H_{11}O_3N$. α-Hydroxy-β-aminoisovaleric acid, preparation, reduction, 1617.

$C_5H_{11}O_3N_3$. Monoacetylguanidine acetate, preparation, analysis, formation of picrate, conversion to 4,6-diacetylamino-2-methyl-1,3,5-triazine, 606.

$C_5H_{11}O_4P$. 1) Methyl ester of 1-hydroxy-2-propene-1-phosphinic acid, preparation, properties, 533.

2) α-Tetrahydrofurfurylphosphinic acid, preparation, ethyl ester, 1243.

$C_5H_{13}ON$. 1) 2-Methyl-3-aminobutanol-1, preparation, properties, 2173; 2-methyl-3-aminobutanol-2, preparation, properties, 2173.

2) 1-Amino-2-methoxy-2-methylpropane, preparation, properties, 2178.

$C_5H_{13}O_3P$. Pentandiol-5,6-phosphinic acid, formation, 1244.

$C_5H_{23}O_4P$. Ethyl ester of 4-phosphonomethylanisyl-dioxolan-1; preparation, properties, 1246.

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$C_5H_7O_5NS$. 1-Methylpyrrolesulfonic-2 acid, electrolytic oxidation of, 922.

$C_5H_9ONCl_2$. 2-Methyl-2,3-dichloro-3-nitrosobutane, preparation, properties, 2170.

$C_5H_{10}ONCl$. 2-Methyl-2-chlorobutanone-3 oxime, preparation, action of NaOH, MeOH, calcium carbonate and alcohol, sodium bicarbonate, sodium bicarbonate-calcium carbonate mixture, reduction with stannous chloride, 2170.

$C_5H_{11}ONBr_2$. Hydrobromide of the imino ester of β-bromopropionic acid, preparation, properties, 1852.

$C_5H_{11}O_2NS^{35}S^{35}$-Methionine, microsynthesis of, 1279.

$C_5H_{12}NOI$. Morpholine methiodide, formation, 550.

$C_5H_{12}O_3PBr$. Diethyl ester of bromomethylphosphinic acid, preparation, properties, 1581.

$C_5H_{12}O_3PCl$. Ethyl chloromethylphosphinate, preparation, properties, 1578.

$C_5H_{12}O_2N_2Cl$. Hydrochloride of α-hydroxy-β-aminoisovaleric amide, preparation, formation of benzoyl derivative, action of sulfuric acid, 1617.

$C_5H_{14}ON_2Cl_2$. 1) Dimethylaminoacetiminomethyl ether dihydrochloride, preparation, properties, 2080.

2) Aminoisobutyroiminomethyl ether dihydrochloride, preparation, properites, 2081; reaction with pyridine, 2089.

## Group $C_6$

## 6. I

$C_6H_6$. Benzene, absorption spectra of diphenylthiocarbazone (dithizone) in, 475; photoreaction with dimethylmercury, 545; reaction with isopropyl alcohol, n-butyl alcohol, ethyl alcohol 1019; alkylation in a continuous-action apparatus, 1019; reaction of nitrogen dioxide with, 1373; nitration with dilute nitric acid, 1379; reaction with anhydrous aluminum chloride, 1429; reaction with carbon dioxide, 1433; electrical conductivity of iodine in solutions of, 1803.

$C_6H_8$. Cyclohexadiene-1,3, formation, 758; reaction with quinoline tetrabromide, 957; reaction with quinoline hydrobromide dibromide, 958; reaction with quinoline dibromide, 958.

$C_6H_8$. Cyclohexadiene-1,3, preparation, properties, reaction with maleic anhydride, 757.

$C_6H_{10}$. 1) Cyclohexene, formation, 1193; rearrangement of hydrogen in, over aluminosilicate catalysts, 1813; reactions with o-chlorophenol, 2045.

2) Diallyl, preparation, addition of HBr, 2187.

3) Hexadiene-1,2, isomerism of, 2007.

4) 2-Methylpentadiene-1,4, formation, bromination, oxidation, 667.

5) 1-Methylcyclopentene-1, rearrangement of hydrogen over aluminosilicate catalysts, 1814.

6) Hexyne-2, formation, 2009.

7) Mixture of isomeric $C_6H_{10}$ alkadienes, preparation, properties, formation of cyclopropanes from, 649.

8) Dehydration product of dimethylallyl carbinol, preparation, properties, bromination, oxidation, 666.

9) Hexadiene-1,2, preparation, properties, dispersion spectrum, isomerization, 2011.

$C_6H_{12}$. 1) 2,2-Dimethylbutene-3, rearrangement of hydrogen in, over aluminosilicate catalysts, 1813; 2,3- — , rearrangement of hydrogen in, over aluminosilicate catalysts, 1813.

2) Hexene-1, rearrangement of hydrogen in, over aluminosilicate catalysts, 1813.

3) 2-Methylpentene-2, rearrangement of hydrogen in, over aluminosilicate catalysts, 1813; rearrangement of hydrogen in, over aluminosilicate catalysts, 1813.

4) 3-Methylpentene-3, rearrangement of hydrogen in, over aluminosilicate catalysts, 1818.

5) 1,1,2-Trimethylcyclopropane, preparation, properties, 647; 650.

$C_6H_{14}$. Hexane, absorption spectra of diphenylthiocarbazone (dithizone) in, 475.

## 6. II

$C_6H_4O_2$. Quinone, preparation in electrochemical oxidation of aniline, 627.

$C_6H_5Br$. 1) Bromobenzene, formation, 957.

2) Product of reaction of cyclohexadiene-1,3, with quinoline tetrabromide, formation, properties, 957.

$C_6H_5I$. Iodobenzene, reaction with sodium dialkylphosphite, 315.

$C_6H_5N$. Pyridine, action of sodium diethylphosphite and triethyl phosphite on some halogen derivatives of, 1247.

$C_6H_6N$. Aminopyridine, tautomerism of, absorption spectra, salt formation, 1253; reaction with alkanesulfochlorides, 1473.

$C_6H_6O$. Phenol, system with water and phosphoric acid, 229; liquid phase equilibrium with phosphoric acid, 229; condensation with tetramethylbutynediol, 521; condensation with 2,5-dimethyl-1,5-hexadien-3-yne, 522; condensation with 5-methyl-1,3-hexadien-5-ol and 5-methylhexan-5-ol, 677; condensation of 5-methyl-1,3-hexadien-5-ol with, 679; condensation with dimethylbutylcarbinol, 680; formation from methanol and acetone, 691; polyalkylation of, 1015; condensation with n- and iso-butyl alcohols, 1015; formation, 1193; bromination with dioxan dibromide, 1637; physicochemical analysis of systems with mono- and tri-chloroacetic acids, 1801; reaction with boron fluoride etherate, 1819; reaction with carboxylic acids and boron fluoride etherate, 1819; reaction with 2,5-diphenylhexyne-3-diol-2,5, 1879; reaction with vinylacetylene $\alpha$-oxides, 2013.

$C_6H_6O_2$. 1) Hydroquinone, bromination with dioxane dibromide, 1637; cyanoethylation, 1685.

2) Lactone of cis-2-(hydroxymethyl)-cyclopropane-1,2-dicarboxylic acid, preparation, properties, 1404.

3) Pyrocatechol, bromination, 1637; cyanoethylation, 1685.

4) Resorcinol, bromination with dioxane dibromide, 1637; preparation of derivatives of, 2049.

$C_6H_6O_3$. 1) Phloroglucinol, bromination with dioxan dibromide, 1638.

2) Pyrogallol, bromination with dioxan dibromide, 1638.

$C_6H_6S$. Thiophenol, reaction with organomercury compounds, 705.

$C_6H_7N$. 1) Aniline, reaction with orthonitrosophenol, 569; reaction with 1-nitroso-2-naphthol, 570; electrochemical oxidation in presence of catalysts, 627; reaction of $\gamma,\gamma$-dimethylallyl chloride with, 673; reaction with 4-piperidones, 687; reaction with alkanesulfochlorides, 1477; alkylation with dialkylphosphoryl chlorides, 2095.

2) $\beta$- and $\gamma$-picoline, preparation, properties, polarography, 2121.

$C_6H_7S$. o-Aminothiophenol, condensation with alkylmalonic acids, 365.

$C_6H_8O$. 1) $\Delta^1$-cyclohexenone, condensation with 1-vinyl-$\Delta^1$-cyclohexenyl,273; condensation with di-$\Delta^1$-cyclohexenyl, 281; condensation with 2-methoxy-1,3-butadiene, 515.

2) Hexadien-2,4-al-1, addition of dialkylphosphorous acids to, 535.

3) $\alpha,\beta'$-Dimethylfuran conversion to $\alpha,\beta'$-dimethylpyrrole, 578.

4) m-Cresol, formation from methanol and acetone, 691.

5) $\alpha,\beta'$-Dimethylfuran, preparation, properties, hydrogenation, reaction with ammonia, 578.

$C_6H_8S$. 2,4-Dimethylthiophene, preparation, properties, 2244.

$C_6H_9Cl$. 3-Chlorohexyne-1, preparation, properties, 2010.

$C_6H_9N$. $\gamma,\gamma$-Dimethylallyl cyanide, preparation, properties, 673.

$\alpha,\beta'$-Dimethylpyrrole, preparation, properties, 578.

$C_6H_{10}O$. 1) Mesityl oxide, preparation, 691; addition of dialkylphosphorous acids, 1415.

2) Methylcyclobutyl ketone, synthesis, properties, 145.

3) 1,4-Endocyclohexane, preparation, properties, catalytic dehydration, 757.

4) Ethyl ether of butadien-2,3, preparation, properties, 1565.

5) Hexyne-1-ol-3, preparation, properties, conversion to chloride, 2010.

$C_6H_{10}O_2$. 1) Formate of $\gamma,\gamma$-dimethylallyl alcohol, preparation, properties, saponification, 674.

2) $\alpha$-Isopropylacrylic acid, preparation, properties, formation of chloroanhydride ethyl ester, addition of bromine, 2002.

$C_6H_{10}O_3$. $\gamma$-Ethoxy-$\gamma$-butyrolactone, preparation, properties, 588.

$C_6H_{10}O_4$. Ethyl oxalate, distribution coefficient of pentavalent vanadium in mixtures with HCl, 2139.

$C_6H_{10}O_6$. 1) Mannonolactone, synthesis, 176.

2) Mannonic acid lactone, preparation, properties, phenylhydrazide, 301.

$C_6H_{11}Br$. 1) Methylpentadiene hydrobromide, preparation, properties, reaction with ethylmagnesium bromide, 500.

2) (5-Bromohexene-1) — product of reaction of $PBr_3$ and hexen-1-ol-5, formation, properties, 2188.

3) (5- and 6-Bromohexen-1) — product of addition of HBr to diallyl, formation, properties, 2188.

$C_6H_{11}Cl$. Methylpentadiene hydrochloride, preparation, properties, reaction with ethylmagnesium bromide, 500.

$C_6H_{12}Br_2$. 4-Bromo-3-bromomethyl-2-methylbutane, preparation, properties, reaction with sodium malonic ester, 2004.

$C_6H_{13}O$. 1) $\alpha,\beta'$-Dimethylfuranidine, preparation, properties, reaction with ammonia, 578.

2) Dimethylallylcarbinol, preparation, dehydration, 666.

3) Methyl isobutyl ketone, formation from methanol and acetone, 691.

4) 2-Methoxyhexadiene-3,5, preparation, properties, 839.

5) Cyclohexanol, combination with $ZnCl_2$, 1171.

6) Methylbutyl ketone, distribution coefficient of pentavalent vanadium in mixtures with HCl, 2139.

7) Hexen-1-ol-6, preparation, properties, 2189.

$C_6H_{12}O_2$. 1) Dimethylethylacetic acid, formation, properties, silver salt, 501.

2) 1,4-Dihydroxycyclohexane, catalytic dehydration, 757.

3) Isopropyl ether of glycidol, preparation, properties, reaction with formamide and acetamide, 986.

4) Caproic acid, electrical conductivity of isooctane solutions of, 1807.

5) Amyl formate, use for extraction of pentavalent vanadium from HCl solutions, 2137.

$C_6H_{12}S$. 1) 2,5-Dimethylthiophane, preparation, 406.

2) α,β'-Dimethylthiophane, preparation, properties, 578.

3) 2-Methyltetrahydrothiopyran, preparation, properties, formation of methiodide, compound with mercuric chloride, dioxide, 1042.

$C_6H_{13}N$. α,β'-Dimethylpyrrolidine, preparation, properties, 578.

$C_6H_{14}O$. 1) Hexyl alcohol, reaction with vinylacetylene α-oxides, 2013.

2) Diisopropyl ether, distribution coefficient of pentavalent vanadium in mixtures with HCl, 2137.

$C_6H_{14}O_2$. Hexamethylene glycol, polyesterification with sebacic acid, 1225.

$C_6H_{15}N$. Triethanolamine, acetylation with ketene, 716.

## 6. III

$C_6H_3OCl_3$. 2,4,6-Trichlorophenol, reaction with dimethylmercury, 1182.

$C_6H_3O_6N_3$. Trinitrobenzene, formation from nitrogen dioxide and benzene, 1373.

$C_6H_3O_7N_3$. Trinitrophenol, formation from benzene and nitrogen dioxide, 1373.

$C_6H_4N_2I_2$. 1,4-Benzoquinonediiododiimide, preparation, properties, reactions, 1060.

$C_6H_4OCl_2$. 2,4-Dichlorophenol, reaction with dimethylmercury, 1182.

$C_6H_4O_2Br_2$. 1) 2,6-Dibromohydroquinone, preparation, 1637.

2) 4,6-Dibromoresorcinol, preparation, 1637.

$C_6H_4O_3Br_2$. 1) Dibromopyrogallol, preparation, 1637.

2) Dibromophloroglucinol, preparation, 1638.

$C_6H_4O_4N_2$. Dinitrobenzene, formation from nitrogen dioxide and benzene, 1373.

$C_6H_4O_5N_2$. Dinitrophenol, formation from benzene and nitrogen dioxide, 1373; interaction with pyridine, 2143.

$C_6H_5BrHg$. Phenylmercury bromide, reaction with thiosalicylic acid and thiophenol, 707.

$C_6H_5ClHg$. Phenylmercury chloride, reaction with thiosalicylic acid, 707.

$C_6H_5NO_2$. Nitrobenzene, condensation with sodium anilide to phenazine, 565; preparation from nitrogen dioxide and benzene, 1373.

$C_6H_5NO_3$. Nitrophenol, formation from nitrogen dioxide and benzene, 1373; bromination with dioxan dibromide, 1638.

$C_6H_5OBr$. p-Bromophenol, preparation, 1637.

$C_6H_5OCl$. o-Chlorophenol, reaction with cyclohexane, 2045.

$C_6H_6O_2Br$. 1) 4-Bromopyrocatechol, preparation, 1637.

2) 4-Bromoresorcinol, preparation, 1637.

3) Bromohydroquinone, preparation, 1637.

$C_6H_6O_3N$. o- and p-Nitrophenols, reaction with aniline, 569; reaction with dimethylmercury, 1182; physicochemical analysis of pyridine interaction, 2143.

$C_6H_6O_3S$. Dioxide of 2-methyl-1-thiopyran-4-one, preparation, properties, condensation with divinyl, 1049.

$C_6H_6O_9Bi_2$. Basic bismuth citrate, preparation, solubility, 1979.

$C_6H_7O_4NS$. 2-Acetylpyrrolesulfonic acid, polarographic investigation, 925

$C_6H_7O_5N_3$. Nitration product of 2-hydroxy-4-methyl-5-carbethoxy-6-phenyldihydropyrimidine, preparation, (2-hydroxy-4-methyl-5-nitrodihydropyrimidine-5-carboxylic acid), 1729.

$C_6H_8O_2Cl_2$. Acetate of chloroprene chlorohydrin, preparation, 1562.

$C_6H_8O_2N_2$. Sulfanilamide, reaction with alkanesulfochlorides, 1473.

$C_6H_8O_3S$. 2-Methyl-2,3-dihydro-1-thiopyran-4-one, preparation, 1451; -5,6-dihydro-1-thiopyran-4-one, preparation, 1452.

$C_6H_9OBr$. Bromocyclohexanone, preparation, 1641.

$C_6H_9OCl$. 1) Product of reaction of chloroether of chloroprene with alcoholic alkali, 1565.

2) Chloroanhydride of isovaleric acid, reaction with isopropylmagnesium bromide, 1991.

$C_6H_9ON_5$. 4-Amino-6-acetylamino-2-methyl-1,3,5-triazine, preparation, 607.

$C_6H_9O_4N$. Ethyl ester of isonitrosoacetoacetic acid, catalytic reduction, 2065.

$C_6H_{10}OCl_2$. Chloroethers of chloroprene, formation, properties, action of alcoholic alkali, bromination, reduction, oxidation, 1565.

$C_6H_{10}OS$. 2-Methyltetrahydro-1-thiopyran-4-one, preparation, reduction, 1041.

$C_6H_{10}O_2Br_2$. Product of reaction of bromine with α-isopropylacrylic acid, formation, properties, 2002.

$C_6H_{11}BrHg$. Hexylmercury bromide, reaction with thiosalicylic acid, 707.

$C_6H_{11}OCl$. 1) 1-Methoxy-3-chloropent-4-en, reaction with organomagnesium compounds, 1596; -chloropent-3-en, reactions with salts of xanthogenic acids, 1602.

2) Ether of chlorocrotonyl alcohol, preparation, properties, 1565.

3) 1-Methoxy-5-chloropent-3-en, reaction with organomagnesium compounds, 1597.

$C_6H_{11}ON$. 1) ε-Caprolactam, coupling with dicarboxylic acids, 1313.

2) Amide of α-isopropylacrylic acid, preparation, 2002.

$C_6H_{11}O_2Ag$. Silver salt of dimethylethylacetic acid, formation, 502.

$C_6H_{11}O_2Cl$. Product of reaction of chloromethyl ether of chloroprene with alkali, formation, properties, 1564.

$C_6H_{11}O_3Ag$. Silver salt of ethoxyisobutyric acid, formation, 2204.

$C_6H_{11}O_3N$. α-Acetoxyisobutyric aldoxime, preparation, properties, solubility, 2178.

$C_6H_{12}AsCl_3$. Tri(α-chloroethyl)-arsine, preparation, properties, 1572.

$C_6H_{12}O_2Hg$. Product of reaction of dimethylmercury and isovaleric acid, 1183.

$C_6H_{12}O_2S$. 2-Methyltetrahydrothiopyran dioxide, preparation, properties, 1042.

$C_6H_{12}O_6Ba$. Barium salt of product of hydrolysis of ethyl ester of α-phosphono-β,γ-epoxypropane, 1245.

$C_6H_{12}Si_2Br_6$. Tri-(Bromomethyl)-silane oxide, preparation, properties, 1824.

$C_6H_{12}SnCl_4$. 1) Tri-(chloroethyl)-chlorotin, preparation, properties, 1831

2) Di-(chloromethyl)-di-(α-chloroethyl)-tin, preparation, properties, 1832.

$C_6H_{13}OCl$. α-Chloroethyl-n-butyl ether, addition to butadiene, 839.

$C_6H_{13}O_4Cl$. Isopropyl ether of glycerol α-monochlorohydrin, preparation, properties, 986.

$C_6H_{13}O_2N$. 1) α-Amino-β-methylvaleric acid, preparation, 1925.

2) 2-Methyl-2-methoxybutanone-3-oxime, preparation, 2171.

3) α-Ethoxyisobutyric aldoxime, preparation, properties, 2177.

$C_6H_{13}O_3N$. N-Propanol-2-methoxy-3-acetamide, synthesis, properties, 153.

$C_6H_{13}O_4P$. Methyl ester of 1-hydroxy-2-butene-1-phosphinic acid, preparation, properties, 534.

$C_6H_{13}O_5P$. 1) Methyl ester of β-dimethylphosphopropionic acid, preparation, properties, 538.

2) β-Dimethylphosphoethyl acetate, preparation, properties, 539.

$C_6H_{14}PbCl_2$. Diethyl-di-(chloromethyl)-lead, preparation, properties, 2116.

$C_6H_{15}ON$. 1) 2-Methyl-2-methoxy-3-aminobutane, preparation, 2172.

2) 1-Amino-2-ethoxy-2-methylpropane, preparation, properties, 2178.

$C_6H_{15}O_3P$. Diisopropylphosphorous acid, reaction with unsaturated compounds, 534; reaction with aldehydes and ketones, 712.

$C_6H_{15}O_4P$. Diethyl ester of α-hydroxyethylphosphinic acid, preparation, properties, 712.

$C_6H_{15}O_6N_3$. Glycylglycylthreonine, preparation, properties, biuret reaction, 1681.

6. IV

$C_6H_3O_4N_2Cl$. 2,4-Dinitrochlorobenzene, condensation with dimethylaniline and monomethylaniline, 325.

$C_6H_4O_2PCl$. Pyrocatechol-phosphinyl chloride, reaction with dimethylaniline, 1524.

$C_6H_4O_3NBr$. 2-Bromo-4-nitrophenol, preparation, 1638.

$C_6H_5O_2NCl_2$. Phenyltrichlorophosphazosulfone, reaction with p-nitrobenzoyl chloride, 337.

$C_6H_7O_7NS_2$. 1-Acetylpyrroledisulfonic acid, polarographic investigation, 924.

$C_6H_6O_2N_2S$. Methanesulfo-α-aminopyridide, preparation, properties, 1474.

$C_6H_6O_2SBr_2$. Dibromoketosulfone, dioxide of 3,5-dibromo-2-methyltetrahydro-1-thiopyran-4-one, preparation, properties, splitting off HBr, 1047.

$C_6H_9O_3NS$. 2,4-Dimethylpyrrolesulfonic-5 acid, polarographic investigation, 922.

$C_6H_{10}OCl_2Br_2$. Bromination product of chloroether of chloroprene, formation, properties, 1565.

$C_6H_{10}O_2N_2S$. $S^{35}$-5-(Methylmercaptoethyl)-hydantoin, preparation, properties, 1280.

$C_6H_{11}OBr_6Si_2$. Tri-(bromomethyl)-silane oxide, preparation, 1824.

$C_6H_{14}O_2PCl$. Ethyl ester of α-chloroethylphosphinic acid, preparation, properties, 1579.

$C_6H_{14}O_4PLi$. Product obtained by heating addition product of lithium chloride and the diisopropyl ester of ethoxymethylphosphinic acid, formation, 975.

$C_6H_{14}O_2PNa$. Sodium salt of methoxyethyl ester of propylphosphinic acid, preparation, 319.

$C_6H_{14}O_3PNa$. Sodium di-β-methoxyethylphosphite, reaction with halogen derivatives, 309, 315.

$C_6H_{14}O_6P_2Na_2$. Product of reaction of ethylene bromide and sodium diethylphosphite, 313.

$C_6H_{15}SNO_4$. N-propanol-2-methoxy-3-ethanesulfonamide, synthesis, 154.

$C_6H_{16}ON_2Cl_2$. β-Dimethylaminopropioniminomethyl ether dihydrochloride, preparation, properties, 2083.

$C_6H_{16}O_{10}P_2Ba$. Barium salt of β,γ-dihydroxypropylphosphinic acid, preparation, 1245, 1246.

6. V

$C_6H_{15}O_3PLiBr$. Product of reaction of lithium bromide and ethyl ester of phosphorous acid, 969.

## Group $C_7$

### 7. I

$C_7H_8$. Toluene comparative aromatization behavior of binary mixtures with heptane and heptene, 827; reaction with nitrogen dioxide, 1373.

$C_7H_{10}$. 1,3-Dimethylcyclopentadiene, formation, 1194.

$C_7H_{12}$. 1) Heptene, comparative aromatization behavior of binary mixtures with heptane and toluene, 827.

2) 1,3-Dimethylcyclopentene, formation, 1193.

3) 1-Methylcyclohexene-1, rearrangement of hydrogen over aluminosilicate catalysts, 1814; 1-Methylcyclohexene-3, rearrangement of hydrogen over aluminosilicate catalyst, 1814.

4) 1-Methyl-1-ethylbutadiene-1,3, preparation, halogenation, 668.

5) Dehydration product of methyl-ethylallylcarbinol, preparation, properties, bromination, iodoxation, 668.

$C_7H_{14}$. 1) Heptene-1, behavior of binary mixtures with heptane and toluene, 827; heptene-3, rearrangement of hydrogen over aluminosilicate catalysts, 1813; Heptene-1, rearrangement of hydrogen over aluminosilicate catalysts, 1813.

2) 5-Methylhexene-1, rearrangement of hydrogen over aluminosilicate catalysts, 1813; 3-Methylhexene-2, rearrangement of hydrogen over aluminosilicate catalysts, 1813; 2-Methylhexene-2, rearrangement of hydrogen over aluminosilicate catalysts, 1813.

3) 2,4-Dimethylpentene-2, rearrangement of hydrogen over aluminosilicate catalysts, 1813.

4) 2,3,3-Trimethyl-1-butene, aromatization of, with chromium catalysts, 2237.

$C_7H_{16}$. Heptane, comparative aromatization behavior of binary mixtures with heptene and toluene, 827.

### 7. II

$C_7H_5N$. Benzonitrile, preparation, properties, 336.

$C_7H_6O$. Benzaldehyde, reaction with sodium dialkylphosphite and dialkylphosphorous acid, 709; Benzaldehyde, effect of temperature on polarographic reduction of, 1799; Benzaldehyde, inhibiting action on acidic corrosion, 1889.

$C_7H_6O_2$. 1) Benzoic acid, reaction with dimethylmercury, 1183; Benzoic acid, reaction with methyl lactolide of methylbenzoylcarbinol, 1203.

2) Furylacrolein, addition of diethylphosphorous acid, 534.

$C_7H_6O_3$. 1) 6-Methyl-3-hydroxy-1,4-benzoquinone, preparation, hydrolytic cleavage, 733.

2) Salicylic acid, reaction with dimethylmercury, 1183; Salicylic acid, bromination with dioxan dibromide, 1638.

$C_7H_7Br$. Benzyl bromide reaction with sodium di-β-methoxyethylphosphite, 313.

$C_7H_7Cl$. Benzyl chloride, reaction with sodium di-β-methoxyethylphosphite, 311.

$C_7H_7N$. α-Vinylpyridine, formation 1248.

$C_7H_8N_4$. 1) 5,6-Diaminobenzimidazole, preparation, properties, condensation with acids, 1067.

2) · 2HCl. Dihydrochloride of 5,6-diaminobenzimidazole, preparation, condensation with organic acids, 1067.

$C_7H_8O$. 1) 2-Methyl-epoxy-1,2-hexen-5-yn-3, reaction with alcohols, 2015; 2-Methyl epoxy-1,2-hexen-5-yn-3, preparation, properties, action of HCl, condensation with acetone, methyl ethyl ketone, methyl isobutyl ketone, 1625.

2) m-Cresol, formation, 691; o-Cresol, formation, 697.

3) Anisole, bromination with dioxan dibromide, 1637.

$C_7H_8O_4$. 1) Hydrated hydroxyquinone, preparation, properties, conversion to original hydroquinone, acetylation, hydrolytic cleavage, 735.

2) Diketocarboxylic acid obtained by hydrolytic cleavage of hydrated hydroxyquinone, preparation, properties, preparation of p-nitrophenylhydrazone, p-nitrobenbenzyl ester, determination of $-CO-CH_3$ group, 736.

3) ·1.5 $H_2O$. Crystal hydrate of acid obtained by hydrolytic cleavage of hydrated hydroxyquinone, preparation, 736.

$C_7H_9N$. 1) Monomethylaniline, condensation with alkyl (or aryl) halides, 325.

2) 2,6-Lutidine, preparation, properties, polarography, 2121.

$C_7H_{10}O$. 1) 1,3-Dimethyl-Δ'-cyclopenten-5-one, condensation with dicyclohexenyl, 290; β,β-dimethyl divinyl ketone, oxidation, 509.

2) 1-Methyl-Δ'-cyclohexen-6-one, condensation with dicyclohexenyl, 289.

3) Vinylisobutylketone, oxidation, 509.

4) Allylisopropenyl ketone, reaction with amines, 1834.

5) Triallylcarbinol, preparation, properties, 1385.

$C_7H_{10}O_2$. 1) Ethylisobutenylketone, oxidation, 509.

2) Monoether of β,β-dimethyldivinyl ketone, preparation, properties, hydrogenation, hydrolysis, 510.

3) 2-Methylhexene-5-yn-3-diol-1,2, preparation, properties, 1626.

$C_7H_{12}O$. 1) 4-Methylcyclohexanone, preparation, 1209; 4-Methylcyclohexanone, condensation with enanthaldehyde, 1209; 4-methylcyclohexanone, preparation 1592; 4-Methylcyclohexanone, reaction with $C_6H_5MgBr$, 1592.

2) 5-Methyl-1,3-hexadien-5-ol, condensation with phenol, 677.

3) 2-Methoxyhexadien-3,5, preparation, properties, reaction with maleic anhydride, 840.

4) 1,3-Dimethylcyclopentan-5-one, catalytic conversion over alumina, 1193.

5) α,β-Dimethyl vinylmethyl ketone, addition of dialkylphosphorous acids, 1415.

6) 6-Methoxy-1-hexen-4-one, reaction with amines, 1709.

$C_7H_{12}O_2$. 1) α-Diketone, 510.

2) Ketonic ether formed from monoether of β,β-dimethyldivinyl ketone, hydrolysis, formation of semicarbazone, 510; - formed by oxidation of ethyl isobutenyl ketone, formation, 513.

$C_7H_{12}O_3$. 1) 2,2-Dimethyl-5-hydroxytetrahydro-4-pyrone, preparation, properties, 511.

2) Hydroxypyrone, preparation, properties, 511.

3) Ketoglycol, preparation, properties, 511.

4) Ethyl β,β-dimethylglycidate, reaction with ammonia, 1615.

$C_7H_{13}O$. 1,2-Dimethyl-4-piperidone, preparation, properties, reduction, 1711.

$C_7H_{14}O$. 1) Methylethylallylcarbinol, preparation, dehydration, bromination, 666.

2) Enanthaldehyde, condensation with 4-alkyl-substituted cyclohexanones, 1209; - inhibiting action on acidic corrosion, 1889.

3) Heptaldehyde, bromination with dioxane dibromide, 1640.

4) Dipropyl ketone, bromination with dioxane dibromide, 1641.

5) Diisopropylketone, bromination with dioxane dibromide, 1641.

$C_7H_{14}O_2$. β-Ketol, preparation, formation of dihydrazone, dehydration, 511; - formation, 512.

2) n-Butyl ether of glycidol, preparation, properties, reaction with acetamide, 986.

3) Isoamyl acetate, physicochemical research on the reaction of titanium tetrachloride with, 1177.

4) Amyl acetate, use for extraction of pentavalent vanadium from HCl solutions, 2137.

$C_7H_{14}O_3$. 1) Ketonic glycol, preparation, 512.

2) Isomer of ketoglycol, formation, 513.

3) α-Ethoxymethylbutyric acid, preparation, properties, formation of acid chloride, 1933.

4) β-Methoxy-α-isopropylpropionic acid, preparation, properties, action of $PCl_5$, formation of amide, esterification, reduction 2003.

$C_7H_{14}S$. 1) 2,5-Dimethyltetrahydrothiopyran, preparation, properties, formation of methiodide, mercuric chloride compound, 1042.

2)·$HgCl_2$. Mercuric chloride compound of 2,5-dimethyltetrahydrothiopyran, preparation, 1043.

$C_7H_{15}N$. 1) 1,2-Dimethyl-4-piperidol, preparation, properties, formation of hydrochloride, 1711.

2)·HCl. Hydrochloride of 1,2-dimethyl-4-piperidol, formation, 1711.

$C_7H_{15}O_2$. Propyl butyrate, reaction with diphenylmercury, 1185.

$C_7H_{16}O$. 1) Dimethylbutylcarbinol, reaction with phenol, 678.

2) Diisopropylcarbinol, preparation, 1991.

$C_7H_{16}O_2$. β-Methoxy-α-isopropylpropyl alcohol, preparation, properties, action of HBr, 2003.

7. III.

$C_7H_4NBr$. o- and p-Bromobenzonitrile, preparation, 338.

$C_7H_4NCl$. p-Chlorobenzonitrile, preparation, properties, 338.

$C_7H_4N_4O_4$. Nitration product of benzimidazole, preparation, reduction to 5,6-diaminobenzimidazole, 1067.

$C_7H_4O_3N_2$. m-Nitrobenzonitrile, preparation, 337; p-nitrobenzonitrile, preparation, 337.

$C_7H_6O_2SPb$. Product of reaction of tetraphenyl lead and thiosalicylic acid, 708.

$C_7H_5N_3O_7$. Trinitrocresol, formation from toluene and nitrogen dioxide, 1373.

$C_7H_5OCl$. Benzoyl chloride, condensation with diene phenol, 679; - condensation with p-isoheptylphenol, 680; - condensation with dimethylbutyl-p-hydroxyphenylmethane, 681.

$C_7H_5O_2Ag$. Silver salt formed from 2-phenylpenten-1-one-3, by action of sulfuric acid then oxidation, 1215.

$C_7H_5O_3Br$. 4-Bromosalicylic acid, preparation, 1638.

$C_7H_6O_2S$. Thiosalicylic acid, reactions with organometallic compounds, 705.

$C_7H_6N_2I_2$. 2,5-Toluquinonediiododiimide, preparation, properties, reactions, 1061.

$C_7H_7BrHg$. p-Tolylmercury bromide, reaction with thiosalicylic acid and thiophenol, 708.

$C_7H_7OBr$. p-Bromoanisole, preparation, 1637.

$C_7H_7O_3Br$. 2-Bromo-3,5-dihydroxytoluene preparation, 1637 (2-bromo-orcin).

$C_7H_8NBr$. 2-(β-Bromoethyl)-pyridine, reaction with sodium diethyl phosphite, 1250.

$C_7H_8O_2S$. Dioxide of 2,5-dimethyl-1-thiopyran-4-one, preparation, condensation with divinyl, 1049.

$C_7H_8O_3S$. p-Toluenesulfonic acid, sulfonation of, and of derivatives, 353.

$C_7H_9OCl$. 2-Methyl-1-chlorohexen-5-yn-3-ol-2, preparation, properties, 1624.

$C_7H_9ON$. 3-Hydroxy-5-aminotoluene, preparation, solubility, 2076.

$C_7H_{10}O_2Br_2$. Dioxide of 3,5-dibromo-2,5-dimethyltetrahydro-thiopyran-4-one, preparation, properties, splitting off HBr, 1048.

$C_7H_{10}O_2S$. Dioxide of 2,5-dimethyl-2,3-dihydro-1-thiopyran-4-one, preparation, condensation with divinyl, 1049.

$C_7H_{11}O_2Cl$. Ethyl ester of 2-(chloromethyl)-cyclopropane-1-carboxylic acid, preparation,

properties, hydrolysis, isomerization, 1395; - of α-chlorallylacetic acid, preparation, properties, hydrolysis, 1395.

$C_7H_{12}OS$. 2,5-Dimethyltetrahydrothiopyran, preparation, polymerization, 1039.

$C_7H_{13}N_3O$. Semicarbazone of mesityloxide, formation, 699.

$C_7H_{15}OBr$. 1) α-Bromoheptyl aldehyde, preparation, 1640.

2) Bromodiisopropyl ketone, preparation, 1641.

3) Bromodipropyl ketone, preparation, 1641.

$C_7H_{15}OCl$. 2-Methoxy-4-chlorohexene-5, preparation, properties, isomerization, 838; -6-chlorohexene-4, preparation, properties, isomerization, 838.

$C_7H_{15}ON$. 1) 2,5-Dimethyl-4-piperidone, reduction, 892; -piperidone, preparation, reduction, 1711.

2) N-methylcaprolactam, preparation, polymerization, 1313.

$C_7H_{15}ON_3$. Semicarbazone of methylcyclobutyl ketone, synthesis, properties, 145.

$C_7H_{15}O_3Ag$. Silver salt of β-ethoxyisovaleric acid, formation, 2199; - of ethoxyisovaleric acid, formation, 2200.

$C_7H_{14}NBr$. N-β-Bromoethylpiperidine, reaction with sodium diethylphosphite, and triethyl phosphite, 1247.

$C_7H_{14}O_2N_2$. Dioxime of α-diketone, 513.

$C_7H_{14}O_3S$. Ethyl α-mercapto-β-hydroxy isovalerate, preparation, properties, removal of sulfur, 1620.

$C_7H_{15}ON$. 2,5-Dimethyl-4-piperidol, preparation, formation of picrate, hydrochloride, 892; 1,2- — 4, piperidol, preparation, properties, reaction with phenol, 1711.

$C_7H_{15}ON_3$. Pinacoline semicarbazone, formation, 1846; - semicarbazone, formation, 1847.

$C_7H_{15}O_2Cl$. 1) n-Butyl ether of α-monochlorohydrin, preparation, properties, 986.

2) Amide of β-methoxy-α-isopropylpropionic acid, formation, 2003.

3) 2-Methyl-2-ethoxybutanone-3-oxime, preparation, properties, 2171.

4) α-n-Propoxyisobutyric aldoxime, preparation, properties, 2177.

$C_7H_{15}O_3N$. N-propanol-2-ethoxy-3-acetamide, 153; -isopropoxy-3-formamide, preparation, analysis, 987.

$C_7H_{15}O_3P$. 1-Diethylphosphonopropene-2, preparation, properties, 2109.

$C_7H_{15}O_4P$. 1) Ethyl ester of 1-hydroxy-2-propene-1-phosphinic acid, preparation, properties, 533; of α-phosphono-β-γ-epoxypropane, preparation, properties, hydrolysis, 1244.

2) 1-Methyl-1-dimethylphosphobutanone-6, preparation, 528.

3) Diester of α-hydroxyalkylphosphinic acid, preparation, properties, 709.

$C_7H_{15}SI$. Methiodide of 2-methyltetrahydrothiopyran, formation, 1042.

$C_7H_{16}O_2N_4$. Semicarbazide-semicarbazone of ethylideneacetone, formation, 699.

$C_7H_{16}O_5N_2$. Bis-β-hydroxyethyl ether of dimethylolurea, preparation, properties, hydrolysis, 1861.

$C_7H_{17}O_4P$. Diester of α-hydroxyalkylphosphinic acid, preparation, properties, 709.

$C_7H_{17}PbCl$. Chloromethyl-triethyl-lead, preparation, properties, 2116.

$C_7H_{19}O_4P$. 1-Methyl-1-diethylphosphobutanone-3, preparation, 528.

7. IV.

$C_7H_4O_2SSn$. Product of reaction of tetraphenyltin and thiosalicylic acid, 708.

$C_7H_5OCl_3Hg$. Product of reaction of dimethyl mercury with 2,4,6-trichlorophenol, 1182.

$C_7H_5O_7N_2Hg$. Product of reaction of dimethylmercury and 2,4,6-trinitrophenol, 1182.

$C_7H_5O_2SBi$. Product of reaction of triphenylbismuth and thiosalicylic acid, 708.

$C_7H_6NSF_3$. p-Aminophenyltrifluoromethyl-sulfide, preparation, acetylation, 2275.

$C_7H_6OCl_2Hg$. Product of reaction of dimethylmercury and 2,4-dichlorphenol, 1182.

$C_7H_6ON_2I_2$. 2-Methoxy-1,4-benzoquinonediiodoiimide, preparation, properties, reactions, 1061.

$C_7H_7O_2NS$. 1) 2-Mercapto-4-aminobenzoic acid, preparation, properties, formation of salts, hydrochloride, picrate, ethyl ester, acetylation, 1897.

2) p-Nitrophenylmethyl sulfide, preparation, chlorination, 2275.

$C_7H_7O_3NHg$. Product of reaction of dimethylmercury and p-nitrophenol, preparation, cleavage, structure, (3-methylmercury-4-nitro-1-hydroxybenzene), 1181

$C_7H_7O_3NS$. 1) Amide of o-toluenesulfonic acid, reaction with $PCl_5$, 331.

2) Methanesulfanilide, preparation, properties, 1478.

$C_7H_7O_3NS$. γ-Lactam of β-(4-carboxythiazolidyl-2)-propionic acid, preparation, properties, 590.

$C_7H_7O_4SNa$. Bisulfite derivative of phenylacetaldehyde, formation, 2020.

$C_7H_{10}O_2N_2S$. Ethanesulfo-α-aminopyridine, preparation, properties, 1474.

$C_7H_{10}O_4N_2S_2$. $N^4$-methanesulfosulfanilamide, preparation, properties, 1475.

$C_7H_{10}O_4PLi$. Product of reaction of lithium iodide and the dibutyl ester of ethoxymethylphosphinic acid, salt, ester, 975.

$C_7H_{11}O_3NS$. 2,4,5-Trimethylpyrrole sulfonic-3 acid, polarographic investigation, 922.

$C_7H_{11}O_3SBr$. Dioxide of 3-bromo-2,5-dimethyltetrahydro-1-thiopyran-4-one, preparation, properties, splitting off HBr, 1048; - of 5-bromo-2,5-

dimethyl-tetrahydro-1-thiopyran-4-one, preparation, properties, splitting off HBr, 1048.

$C_7H_{11}O_2SBr_2$. Dioxide of 3,5-Dibromo-2,5-dimethyl-tetrahydro-1-thiopyran-4-one, preparation, properties, splitting off of HBr, 1048.

$C_7H_{11}O_4NS$. N-Carbethoxythiazolidine-4-carboxylic acid, preparation, properties, 591.

$C_7H_{14}O_2Cl_4Ti$. Compound formed in titanium chloride- isoamyl acetate system, 1179.

$C_7H_{15}O_3PBr_2$. 1,2-Dibromo-3-diethylphosphono-propane, preparation, properties, 2109.

$C_7H_{16}O_3NP$. N-(β-phosphono ethyl)-piperidine, hydrochloride, preparation, properties, derivatives, 1248.

$C_7H_{16}O_2PLi$. Product of reaction of lithium chloride and the dibutyl ester of ethoxymethylphosphinic acid, preparation, 973.

## 7. V

$C_7H_4O_2NCl_3S$. p-Nitrophenyltrichloromethyl sulfide, preparation, fluorination, 2275.

$C_7H_4O_2NF_3S$. p-Nitrophenyltrifluoromethyl sulfide, preparation, properties, 2275.

$C_7H_{11}O_3NPBr$. Aniline salt of bromomethylphosphinic acid, preparation, properties, 1581.

$C_7H_{11}O_3NPCl$. Aniline salt of chloromethylphosphinic acid, formation, 1578.

$C_7H_{16}NOSI$. Thioacetylcholine iodide, preparation, 328.

## 7. VI.

$C_7H_7O_2NCl_2SP$. Tolyl-o-trichlorophosphazosulfone, preparation, properties, analysis, 332; - p-trichlorophosphazosulfone, preparation, properties, analysis, 332.

## Group $C_8$

### 8. I

$C_8H_{10}$. 1) 2,5-Dimethyl-1,5-hexadien-3-yne, condensation with phenol, 519.

2) Ethylbenzene, preparation, properties, 1020.

$C_8H_{14}$. 1) 2,5-Dimethylhexadien-1,5, formation, 406; -2,4, formation, 406.

2) Mixture of 2,4-dimethylhexadien-2,4 and 2-ethyl-4-methylpentadien-1,3, preparation, reaction with HBr, 647.

$C_8H_{16}$. 1) 3-Ethylhexene-2, rearrangement of hydrogen over aluminosilicate catalysts, 1813; 2- - -1, rearrangement of hydrogen over aluminosilicate catalysts, 1813.

2) 4,4-Dimethylhexene-2, preparation, properties, Raman spectra, 500; 2,4-dimethylhexene-2, preparation, properties, Raman spectra, 500.

3) 1,1,2-Trimethyl-2-ethylcyclopropane, preparation, properties, 650.

4) Octene-1, rearrangement of hydrogen over aluminosilicate catalysts, 1813.

5) 4-Methylpentene-3, rearrangement of hydrogen over aluminosilicate catalysts, 1813.

$C_8H_{18}$. 1) 2,2,4-Trimethylpentane, photoreaction with dimethylmercury, 545; - solutions of fatty acids, electrical conductivity of, 1807.

2) 3,3-Dimethylhexane, formation, properties, 502; 2,4-dimethylhexane, formation, properties, 502.

3) Isooctane, electrical conductivity of solutions of iodine in, 1803; - electrical conductivity of solutions of saturated fatty acids in, 1807.

### 8. II.

$C_8H_4N_2$. Dinitrile of phthalic acid, preparation, 338.

$C_8H_6Cl_2$. Dichlorostyrenes (2,5-, 2,4-, 3,4-), preparation, 551; - polymerization, 851.

$C_8H_6O_4$. Phthalic acid, reaction with dimethylmercury, 1183.

$C_8H_7N$. o,m,p-tolunitriles, preparation, 338.

$C_8H_8N_2$. 2-Methylbenzimidazole, nitration, 1066.

$C_8H_8O$. 1) Acetophenone, reaction with sodium dialkylphosphite and dialkylphosphorous acids, 709; - bromination with dioxane dibromide, 1641; - use for extraction of pentavalent vanadium from HCl solutions, 2137.

2) Phenylacetaldehyde, bromination with dioxan dibromide, 1641.

3) Styrene oxide, reaction with ammonia, thermal decomposition, 2019.

$C_8H_8O_2$. Methyl benzoate, distribution coefficient of pentavalent vanadium in mixtures with HCl, 2139.

$C_8H_8O_3$. 1) Anisic acid, preparation, properties, 524.

2) Arylglycolic acid (phenoxyacetic acid), preparation, 693.

$C_8H_{10}N_4$. 5,6-Diamino-2-methyl-benzimidazole, preparation, condensation with organic acids, 1066.

$C_8H_{10}O$. 1) Dimethylphenol, formation from methanol and acetone, 691; 3,5-dimethylphenol, preparation, formation of tribromide, condensation with monochloracetic acid and sodium hydroxide, 692; - preparation, condensation with monochloracetic acid and sodium hydroxide, 698.

2) 3-Methylepoxy-2,3-hepten-6-yn-4, preparation, properties, action of sulfuric acid, condensation with acetone, methyl ethyl ketone, methylisobutyl ketone, mesityl oxide, 1625.

3) Ketone formed from hydrolysis of a dioxolane, 1627.

4) Xylenol, bromination with dioxan dibromide, 1637.

$C_8H_{10}O_2$. γ-Furyl-α-methylallyl alcohol, preparation, properties, dehydration, acetylation, 2289.

$C_8H_{18}O_4$. Butynediol acetate, preparation, properties, catalytic hydrogenation, 1446.

$C_8H_{11}N$. 1) Dimethylaniline, condensation with alkyl (or aryl) halides, 325.

2) Ethylaniline, hydrolysis, 918; - reaction with furanidine, 919.

$C_8H_{12}O_2$. 1) Cyclohexenyl-$\Delta'$-acetate, preparation, properties, 1206.

2) 3-Methylhepten-6-yn-4-diol-2,3, preparation, properties, 1626.

3) Product of reaction of 2-methyl-epoxy-1,2-hexen-5-yn-3 with methyl alcohol, 2015.

$C_8H_{12}O_4$. Hydrogenation product of 1,4-butynediol acetate, formation, properties, 1447.

$C_8H_{14}O$. 1) Allenic ether, formation, properties, 1566.

2) Methyl-(cyclohexen-3-yl)-carbinol, preparation, properties, oxidation, acetate, 655.

$C_8H_{14}O_2$. 1) Octyne-4-diol-3,6, preparation, properties, hydrogenation, 407.

2) Tetramethylbutynediol, condensation with phenol, 519.

3) Propionate of $\gamma,\gamma$-dimethylallyl alcohol, preparation, properties, saponification, 674.

4) Cycloheptanecarboxylic acid, preparation, formation of acid chloride, amide, 873.

5) $\alpha$-Methylvinyl-$\gamma$-methoxypropyl ketone, addition of dialkylphosphorous acids, 1416.

6) Hydrogenation product of 1,4-butynediol, formation, properties, 1447.

7) 2-Methyl-5-methoxy-1-hexene-3-one, reaction with amines, 1834.

8) 5-Methylhepten -1-ic acid-6, preparation, properties, 1997.

9) Ethyl ester of $\alpha$-isopropylacrylic acid, preparation, properties, reaction with bromine, 2002.

10) Hexen -1-yl-6-acetate, preparation, properties, 2189.

$C_8H_{14}O_3$. $\beta,\beta$-Dimethylvinyl-$\beta'$-methoxyethyl ketone, addition of dialkylphosphorous acids, 1417.

$C_8H_{14}O_5$. Ethoxymethylethylmalonic acid, preparation, action of heat, 1933.

$C_8H_{16}O$. 1) 2,2,5,5-Tetramethylfuranidine, catalytic dehydration, 405.

2) 2,5-Diethylfuranidine, preparation, properties, catalytic dehydration, 407.

3) 1-Methoxyhept-3-en, preparation, properties, 1597.

4) Octaldehyde, bromination with dioxan dibromide, 1640.

5) Ethylhexenyl ether, preparation, properties, 2188.

$C_8H_{16}O_2$. 1) Methylethylpropylacetic acid, preparation, formation of silver salt, 643.

2) Caprylic acid, distribution coefficient of pentavalent vanadium in mixtures with HCl, 2138.

$C_8H_{16}O_3$. 1) 1-Methoxyhept-3,4-diol, preparation, properties, 1597.

2) 1,5-Dimethoxyhexan-3-one, reaction with amines, 1709.

$C_8H_{16}S$. 2,5-Diethylthiophane, formation, 409.

$C_8H_{18}N_2$. 2,5-Dimethyl-4-methylaminopiperidine, preparation, properties, formation of picrate, 685.

$C_8H_{18}O$. Product of reaction of isopropylmagnesium bromide and the chloroanhydride of isovaleric acid, formation of semicarbazone, 1991.

$C_8H_{18}O_2$. Octane-diol-3,6, preparation, properties, 407.

$C_8H_{18}O_3$. 1-Methoxy-3,4-dihydroxyheptane, preparation, properties, 1597.

$C_8H_{19}N$. Dibutylamine, hydrolysis, reaction with furanidine, 917.

## 8. III

$C_8H_4N_4Br_2$. 3,6-Dibromo-1,2,4,5-diimidazolobenzene, preparation, 1074.

$C_8H_4N_4Cl_2$. 3,6-Dichloro-1,2,4,5-diimidazolobenzene, preparation, properties, salt, 1073.

$C_8H_4O_2N_4$. 1,2,4,5-Diimidazolo-3.6-benzoquinone, preparation, properties, 1072.

$C_8H_4O_8N_2$. 3,5-Dinitrophthalic acid, preparation, formation of monoethyl ester, 1090.

$C_8H_5O_2Cl_3$. Phenyl trichloroacetate, effect of temperature on polarographic reduction of, 1799.

$C_8H_5O_2N_5$. Nitrodiimidazolobenzene, preparation, 1075.

$C_8H_6N_4Br_2$. 3,6-Dibromo-1,2,4,5-diimidazolobenzene, preparation, properties, salt, 1074.

$C_8H_6N_4Cl_4$. 3,6-Dichloro-1,2,4,5-diimidazolobenzene, dihydrochloride, preparation, properties, 1073.

$C_8H_6O_4N_4$. 5,6-Dinitro-2-methylbenzimidazole, preparation, 1066.

$C_8H_7NO_3$. Indole sulfonic acid, polarographic investigation of, 927.

$C_8H_7OBr$. 1) $\omega$-Bromacetophenone, preparation, 1641.

2) Phenylbromoacet-aldehyde, preparation, 1641.

$C_8H_7O_3N$. m-Nitroacetophenone, catalytic reduction of, 562.

$C_8H_8O_2Hg$. 1) Phenyl-mercury acetate, preparation, 1185.

2) Product of reaction of dimethyl-mercury and benzoic acid, 1183.

$C_8H_8O_3Hg$. Product of reaction of dimethyl-mercury and salicylic acid, 1183.

$C_8H_8O_3S$. p-Methylsulfonylbenzaldehyde, preparation, properties, thiosemicarbazone, 1706.

$C_8H_9OBr$. 4-Bromo-1,3,5-xylenol, preparation, 1637.

$C_8H_9ON$. m-Aminoacetophenone, preparation, 563.

$C_8H_9O_2N$. 4-Amino-2-methoxybenzaldehyde, preparation, properties, derivatives, 1701.

$C_8H_9O_3N$. 2-Hydroxy-4-amino-5-methylbenzoic acid, preparation, solubility, 2076; -4-amino-6-methylbenzoic acid, preparation, solubility, 2076.

$C_8H_9O_4N_3$. 2-Methoxy-4-nitrophenylmethylnitroamine, formation, action of HCl, 1218.

$C_8H_{10}O_2Hg_2$. Product of reaction of dimethylmercury and resorcinol, 1182.

$C_8H_{10}O_2N_2$. 4-Amino-5-nitro-1,2-xylene, preparation, properties, 583.

$C_8H_{10}O_3N_2$. 2-Methoxy-4-nitromethylaniline, formation, reaction with nitrous acid, 1218.

$C_8H_{11}OCl$. 3-Methyl-2-chlorohepten-6-yn-4-ol-3 preparation, properties, action of KOH, 1625.

$C_8H_{11}O_2N_5$. 4,6-Diacetylamino-2-methyl-1,3,5-triazine, preparation, 606.

$C_8H_{12}O_3N_2$. 2-Hydroxy-4-methyl-5-carboxydihydropyrimidine, reaction with diazo compounds, 1721, derivatives, 1721.

$C_8H_{13}N_3Cl_2$. N-Phenyl-aminoacetamidine[(N-phenylglycineamidine)-dihydrochloride], preparation, solubility, 2087.

$C_8H_{13}OCl$. Methyl-(4-chlorocyclohexen-3-yl)-carbinol, preparation, properties, acetylation, 659.

$C_8H_{14}OCl_2$. Product of reaction of N,N-dichlorophenylsulfonamide on solutions of chloroprene, in butyl alcohol, formation, properties, 1566.

$C_8H_{14}O_2Br_2$. Product of reaction of bromine and $\alpha$-isopropylacrylic acid, ethyl ester, formation, properties, 2003.

$C_8H_{15}OBr$. $\alpha$-Bromo-octaldehyde, preparation, properties, 1641.

$C_8H_{15}OCl$. 1) 2-Ethoxy-4-chlorohexene-5, preparation, properties, 839; -6-chlorohexene, preparation, properties, 839.

2) Chlorobutenol ether of chloroprene, formation, properties, 1566.

$C_8H_{15}ON$. 1) 1,2,5-Trimethylpiperidone, reduction, 892.

2) Aminoalcohol from hydrolysis of macrotomine, (trachelantamidine), 1499.

3) 1-Ethyl-2-methyl-4-piperidone, preparation, properties, formation of picrate, 1714.

$C_8H_{15}O_2Ag$. Silver salt of methylethylpropylacetic acid, preparation, 643.

$C_8H_{15}O_2N$. Turneforcidine, preparation, properties, 1510.

$C_8H_{15}O_2N_3$. Semicarbazone of ketonic ether, formation, 511.

$C_8H_{15}O_4P$. 1-Dimethylphosphohexadien-2,4-ol-1 preparation, properties, 535.

$C_8H_{15}O_5N_3$. Glycylglylthreonine, preparation, properties, biuret reaction, 1681.

$C_8H_{16}NBr$. N-($\gamma$-bromopropyl)-piperidine, reaction with sodium diethylphosphite and triethylphosphite, 1249.

$C_8H_{16}OBr_2$. 1-Methoxy-3,4-dibromoheptane, preparation, 1595.

$C_8H_{16}O_2S_2$. Methox ypentenyl ethylxanthogenate, preparation, properties, 1602.

$C_8H_{18}SnCl_4$. 1) Tetra-(chloroethyl)-tin, preparation, properties, 1831.

2) Di-($\alpha$-chlorobutyl)-dichlorotin, preparation, properties, 1831.

$C_8H_{17}ON$. 1,2,5-Trimethyl-4-piperidol, preparation, properties, formation of picrate, hydrochloride, 895.

$C_8H_{17}O_3N$. N-propanol-2-isopropoxy-3-acetamide, preparation, properties, analysis, oxidation, 987.

$C_8H_{17}O_3P$. Diethylphosphonobutene-2, preparation, properties, 2110.

$C_8H_{17}O_4P$. 1) Diethyl ester of 1-hydroxy-2-butene-1-phosphinic acid, preparation, properties, saponification, 534.

2) Dimethyl ester of $\alpha$-hydroxycyclohexylphosphinic acid, preparation, properties, 712.

3) 3-Methyl-4-dimethylphosphopentanone-2, prepration, properties, action of bromine, oxidation, formation of phenylhydrazone, 1418.

$C_8H_{17}O_5P$. 1) Methyl ester of $\beta$-diethylphosphopropionic acid, preparation, properties, saponification, 539.

2) $\beta$-Diethylphosphoethyl acetate, preparation, properties, 539.

3) Ethyl ester of 4-phosphonomethyldioxolan-1,3, preparation, properties, 1245.

$C_8H_{17}SI$. Methiodide of 2,5-dimethyltetrahydrothiopyran, preparation, 1043.

$C_8H_{18}SnCl_2$. Di-($\alpha$-chloroethyl)-diethyltin, preparation, properties, 1832.

$C_8H_{19}O_3P$. Diisobutyl and di-n-butyl-phosphorous acids, addition of unsaturated compounds, 528, 534, 539.

$C_8H_{19}O_4P$. Diester of $\alpha$-hydroxyalkylphosphinic acid, preparation, properties, 709.

$C_8H_{19}O_5P$. Ester of ethylphosphinic acid, preparation, properties, 312.

8. IV

$C_8H_5N_2S_2F_3$. 2-Amino-6-trifluoromethylmercaptobenzthiazole, preparation, formation of hydrochloride, acetyl derivative, action of methyl-p-toluene sulfonate, 2276.

$C_8H_6NSF$. 2-Methyl-5-fluorobenzthiazole, preparation, formation of ethiodide, 2270.

$C_8H_6O_6S_4Ba$. Barium thiophenesulfonate, preparation, 191.

$C_8H_7O_3NS$. Indolesulfonic acids (1,2,3-), polarographic investigation of, 927.

$C_8H_9ONHg$. Phenylmercuryacetamide, preparation, properties, reaction with HCl and NaI, properties, 701.

$C_8H_9O_2N_3S$. Thiosemicarbazone of β-resorcyl aldehyde, formation, 2052.

$C_8H_9O_5NS$. γ-Lactam of α-carboxy-β-(4-carboxy-thiazolidyl-2)-propionic acid, preparation, properties, 590.

$C_8H_{11}ON_2Cl$. α-Phenylglycineamide hydrochloride, preparation, solubility, 2082.

$C_8H_{11}O_2NS$. Ethanesulfanilide, preparation, properties, 1478.

$C_8H_{11}O_2NS$. Methanesulfanisidide, preparation, properties, 1479.

$C_8H_{12}ON_2Cl_2$. m-Aminobenziminomethyl ether dihydrochloride, preparation, solubility, 2083.

$C_8H_{12}O_2N_2Br_2$. Dibromide of 2-hydroxy-4-methyl-5-carbethoxydihydropyrimidine, preparation, solubility, 1728.

$C_8H_{12}O_2N_2S$. 2-Methylethanesulfo-α-aminopyridide, preparation, properties, 1474.

$C_8H_{12}O_4N_2S_2$. $N^4$-ethanesulfosulfanilamide, preparation, properties, 1475.

$C_8H_{13}O_3N_2S$. Dioxide of 2,5-dimethyl-5,6-dihydro-1-thiopyran-4-one, preparation, condensation with divinyl, 1049.

$C_8H_{18}O_2ClP$. Di-n-butylphosphoryl chloride, alkylation of amines with, 2097.

$C_8H_{17}O_3PBr_2$. 1-Diethylphosphono-2,3-dibromobutane, preparation, properties, 2111.

$C_8H_{18}O_3NP$. N-(γ-phosphonopropyl)-piperidine, preparation, properties, derivatives, 1249.

$C_8H_{18}O_3PLi$. Product of reaction of lithium bromide and the butyl ester of phosphorous acid, formation, 969.

$C_8H_{18}O_3PNa$. Product of reaction of sodium bromide and butyl phosphate, formation, 975

$C_8H_{18}O_3P_2Na_2$. Product of reaction of ethylene bromide and sodium-di-β-methoxyethylphosphite, 312.

8. V

$C_8H_7O_5NSNa_2$. Sodium salt of γ-lactam of α-carboxy-β-(4-carboxythiazolidyl-2)-propionic acid, preparation, properties, 590.

Group $C_9$

9. I

$C_9H_{12}$. Isopropenylcyclohexadiene. Hydrocarbon formed by dehydrating dimethylcyclohexadienylcarbinol, preparation, properties, isomerization, bromination, oxidation, condensation with maleic anhydride, 952.

2) Isopropylbenzene, preparation, properties, 1020.

$C_9H_{14}$. Dehydration product of dimethyl-(cyclohexen-3-yl)-carbinol, 653.

$C_9H_{16}$. 1) Mixture of 3,5-dimethylheptadiene and 3-methyl-5-ethylhexadiene, preparation, hydrogenation, 252; -2,4, and 2-ethyl-4-methylhexadiene-1,3, preparation, reaction with HBr, 650.

2) Allylcyclohexene, rearrangement of hydrogen over aluminosilicate catalysts, 1814.

3) 1-Butylcyclopentene-1, rearrangement of hydrogen over aluminosilicate catalysts, 1814.

4) 1-Propylcyclohexene-1, rearrangement of hydrogen over aluminosilicate catalysts, 1814.

$C_9H_{18}$. 1) 4,4-Dimethyl-heptene-1, preparation, properties, bromination, 636; 1,2- — -1,2-diethylcyclopropane, preparation, properties, 650.

2) Nonene-1, rearrangement of hydrogen over aluminosilicate catalysts, 1813; -4, rearrangement of hydrogen over aluminosilicate catalysts, 1813.

3) 4,4,5-Trimethylhexene-1, preparation, properties, bromination, 636.

$C_9H_{20}$. 1) 3,5-Dimethylheptane, preparation, properties, Raman spectra, 251; 4,4-dimethylheptane, preparation, properties, 637.

2) 2,3,4-Trimethylhexane, preparation, properties, Raman spectra, 254; 2,3,3-trimethylhexane, preparation, properties, 637.

9. II

$C_9H_7N$. Quinoline, preparation of derivatives of, 2257; - preparation, formation of picrate, 2258.

$C_9H_9N_3$. Aminomethylene-(phenyl)acetonitrile, preparation, properties, 1660.

$C_9H_8N_4$. Methyl-diimidazolo-1,2,4,5-benzene, preparation, properties, 1064; oxidation, halogenation, nitration, 1069.

$C_9H_8O$. 1) Crotonaldehyde, addition of dialkylphosphorous acids, 534.

2) Cinnamaldehyde, addition of dialkylphosphorous acids to, 535.

3) Oxymethylenephenylacetic acid, preparation, properties, reaction with cysteine hydrochloride, 1081.

$C_9H_8O_2$. 1) Cinnamic acid, kinetics of hydrogenation, 623.

2) Crotonic acid, addition of dialkylphosphorous acids to ethyl ester, 1189.

$C_9H_{10}O$. 1) Methylbenzylketone, reaction with ammoniacal silver oxide, 1382; - distribution coefficient of pentavalent vanadium in mixtures with HCl, 2138.

2) Methyl-o-tolylketone, preparation, 1413.

$C_9H_{10}O_2$. Methylbenzoylcarbinol, methyllactolide of, transformation when acted upon by acid and alkaline reagents, 1197.

$C_9H_{10}O_3$. 1) m-Cresoxyacetic acid, preparation, 693.

2) Orthocresoxyacetic acid, preparation, 697.

$C_9H_{12}Br_4$. Bromination product of isopropenylcyclohexadiene, 952.

$C_9H_{12}O$. 1) Condensation product of methanol and methylethyl ketone, 697.

2) 4-Methylacetylcyclohexadiene-1,4, preparation, formation of semicarbazone, p-nitrophenylhydrazone, reaction with methyl ethynyl ketone, 953;

preparation, formation of semicarbazone, p-nitrophenylhydrazone, 954.

$C_9H_{12}O_2$. γ-Furyl-α-ethylallyl alcohol, preparation, properties, formation of acetate, 2290.

$C_9H_{13}Cl$. Chloroisosantene, reaction in alcohol, 865.

$C_9H_{13}Cl$. Dehydration product of dimethyl-(4-chlorocyclohexen-3-yl)-carbinol, formation, dehydrogenation, 661.

$C_9H_{14}O$. 1) 2-Methylacetylcyclohexene-3, preparation, properties, 659.

2) Phorone, formation, 691.

3) Dimethyl-(cyclohexadien-1,4-yl)-carbinol, preparation, dehydration, 853.

4) Isosantenol, preparation, properties, 869.

$C_9H_{14}O_2$. Product of reaction of 3-methylepoxy-2,3-hepten-6-yn-4 and methyl alcohol, 2016.

$C_9H_{14}O_4$. 1) Cycloheptane-1,1-dicarboxylic acid, preparation, properties, conversion to acid chloride, 873.

2) Product of reaction of ethyl diazoacetate and allyl acetate, 1403.

3) γ-Ethyl-δ-valerolactone-β-acetic acid, preparation, action, of HBr, 1935.

4) α-Methyl-δ-pentenylmalonic acid, preparation, action of heat, 1997.

5) 1-Isopropylcyclobutane-3,3-dicarboxylic acid, preparation, formation of diamide, 2005.

$C_9H_{15}Cl$. 2,2,3-Trimethyl-3-chlorohexyene-4, reaction with organomagnesium compounds, 1843.

$C_9H_{16}$ 1) Product from distillation of dienes over sodium, 251.

2) 3,5-Dimethylheptane, preparation, properties, Raman spectrum, 251.

3) Mixture of 2,3,4-trimethylhexadienes, preparation, properties, hydrogenation, 254

4) Mixture of isomeric $C_9H_{16}$ alkadienes, preparation, properties, formation of cyclopropanes from, 650.

$C_9H_{16}O$. 1) Dimethyl-(cyclohexen-3-yl)-carbinol, preparation, properties, dehydration, 653.

2) Ethyl-(cyclohexen-3-yl)-carbinol, preparation, properties, oxidation, acetate, 653.

3) Methyl-(2-methylcyclohexen-3-yl)-carbinol, preparation, properties, oxidation, 653.

$C_9H_{16}O_6$. δ-Lactone of 3,4,6-trimethylgalactonic acid, synthesis, 171.

$C_9H_{18}Br_2$. 1,2-Dibromo-4,4-dimethylheptane, preparation, properties, 636; 5,6 — 2,3,3-trimethylhexane, preparation, properties, 636.

$C_9H_{18}$ . 3,5-Dimethylheptene-3, preparation, properties, oxidation, 252.

$C_9H_{18}N_2$. 1,2,5-Trimethyl-4-methyliminopiperidine, preparation, properties, hydrolysis, hydrogenation, 685.

$C_9H_{18}O_2$. 1) 1-Butoxy-3-penten-5-ol, preparation, properties, formation of dibromide, 1422; -4-penten-3-ol, preparation, properties, formation of dibromide, 1422.

2) 2-Methoxy-6-ethoxyhexene-4, preparation, properties, 839.

3) Methylethylbutylacetic acid, formation, preparation of Ag salt, 643.

$C_9H_{18}O_3$. 1) 1,5-Dimethoxy-2-methylhexan-3-one, reaction with amines, 1835.

2) β-Methoxy-α-isopropylpropionic acid ester, preparation, properties, saponification, 2003.

$C_9H_{19}N$. Diethyl-γ,γ-dimethylallylamine, preparation, properties, formation of picrate, 672.

$C_9H_{20}N_2$. 1,2,5-Trimethyl-4-methylaminopiperidine, preparation, properties, picrate, 686.

## 9. III

$C_9H_5O_5Ag$. Silver salt of o-phthalic acid, formation, 1886.

$C_9H_6N_2S$. 2-Methyl-5-cyanobenzthiazole, preparation, action of sulfuric acid, 2270.

$C_9H_6N_4Br_2$. Methyl-3,6-dibromo-1,2,4,5-diimidazolobenzene, preparation, 1074.

$C_9H_6N_4Cl_2$. Methyl-3,6-dichloro-1,2,4,5-diimidazolobenzene, preparation, properties, salts, 1073.

$C_9H_6O_2N_4$. Methyl-1,2,4,5-diimidazolo-3,6-benzoquinone, preparation, properties, solubility, 1072.

$C_9H_7ON$. 8-Hydroxyquinoline, derivatives, 1263; - derivatives, 1269.

$C_9H_7O_2N$. N-Oxide of 8-hydroxyquinoline, preparation, properties, catalytic reduction, 1269.

$C_9H_7O_2N_5$. Nitromethyldiimidazolobenzene, preparation, 1075.

$C_9H_7O_3Ag$. Silver salt of o-acetylbenzoic acid, formation, analysis, 1885; - formation, 1886.

$C_9H_8N_4Cl_4$. Methyl-3,6-dichloro-1,2,4,5-diimidazolobenzene hydrochloride, preparation, 1074.

$C_9H_8O_5S$. Benzaldehyde-p-sulfonyl acetic acid, preparation, thiosemicarbazone, 1707.

$C_9H_9OCl$. Methyl-p-chlorobenzoylcarbinol, and p-chlorophenylacetylcarbinol, formation, 1426.

$C_9H_9O_2N$. 1) Hydroxymethylene-phenylacetamide, formation, 1661.

2) p-Acetaminobenzaldehyde, preparation, of p-aminophenylalanine, 1919.

$C_9H_9O_3Ag$. 1) Silver salt of methoxyphenylacetic acid, formation, 1875.

2) Silver salt of methylphenylglycollic acid, formation, 1886.

$C_9H_9O_3N$. Hippuric acid, reaction with methylethyl ketone, 1923.

$C_9H_{10}N_2S$. 2-Amino-5,6-dimethylbenzothiazole, preparation, formation of salts, 583; -6,7-dimethylbenzothiazole, preparation, properties, salts, 583.

$C_9H_{10}O_2N_2$. 4-Acetamino-3-aminobenzaldehyde, preparation, properties, thiosemicarbazone, 1702.

$C_9H_{10}O_3N_4$. 8-Caffeine aldehyde, desulfurization, 2287.

$C_9H_{10}O_3S$. p-Ethylsulfonylbenzaldehyde, preparation, 1706.

$C_9H_{10}O_4N_4$. Acetone,2,4-dinitrophenylhydrazone, formation, 1626.

$C_9H_{11}ON$. 1) Aceto-o-toluidide, cyclization, 2258.
2) Methylacetanilide, cyclization, 2258.

$C_9H_{11}ON_3$. 1) Semicarbazone of acetophone, formation, 1214.
2) Acetophenone semicarbazone, formation, 1847; - semicarbazone, formation, 1848.

$C_9H_{11}O_2N$. Phenylalanine, analogs, preparation, 1919.

$C_9H_{11}O_2N_3$. Acetone p-nitrophenylhydrazone, formation, 1846.

$C_9H_{11}O_3N$. 4-Amino-2-hydroxyhydrocinnamic acid, preparation, 1703.

$C_9H_{11}O_4P$. 1-Hydroxy-3-phenyl-2-propen-1-phosphinic acid, preparation, properties, 535.

$C_9H_{11}O_5P$. β-Phenyl-β-phosphonopropionic acid, preparation, properties, 1190.

$C_9H_{12}N_2S$. 3,4-Dimethylthiourea, preparation, oxidation, 582.

$C_9H_{12}ON_2$. Amide of cyclohexenylcyanacetic acid, preparation, identification, 912.

$C_9H_{12}O_2N_2$. p-Aminophenylalanine, preparation, action of dichloroacetyl chloride, 1921.

$C_9H_{12}O_3N_2$. Product of reaction of 2-methoxy-dimethylaniline with nitrous acid, 1218.

$C_9H_{12}O_4N_2$. Morpholine carbonate, formation, 550.

$C_9H_{13}NS$. Nitrile of 2,5-dimethyldihydro-4-thiopyranacetic acid, preparation, properties, ozonation, saponification, 902.

$C_9H_{13}ON_3$. Semicarbazone of ketone, obtained from hydrolysis of a dioxolane, formation, 1627.

$C_9H_{13}O_3N_4$. 8-Hydroxymethylcaffeine, desulfurization, 2287.

$C_9H_{13}O_4P$. Dimethyl ester of α-hydroxybenzylphosphinic acid, preparation, properties, 709.

$C_9H_{14}O$. Propionylcyclohexene-3, preparation, properties, formation of semicarbazone, 659.

$C_9H_{14}O_2S$. 1) 2,5-Dimethyl-Δ-3,4-dihydro-4-thiopyranacetic acid, preparation, properties, 903; -Δ-4,5-dihydro-4-thiopyranacetic acid, preparation, formation of sulfone, 906.
2) 2,5-Dimethyltetrahydro-4-thiopyrylideneacetic acid, preparation, oxidation to sulfone, formation of anilide, ozonation, 907.

$C_9H_{14}O_3S$. Sulfoxide obtained by oxidizing a mixture of 2,5-dimethyldihydro-4-thiopyranacetic acids, 904.

$C_9H_{14}O_4S$. Sulfone obtained by oxidation of 2,5-dimethyldihydro-4-thiopyranacetic acids, 903; - obtained from sulfoxide, 904; - formed by oxidizing 2,5-dimethyltetrahydro-4-thiopyrylideneacetic acid, 907.

$C_9H_{15}OCl$. Dimethyl-(4-chlorocyclohexen-3-yl)-carbinol, preparation, properties, bromination, dehydration, 660.

$C_9H_{15}O_4Br$. β-(α'-Bromometho)-propylglutaric acid, preparation, 1935.

$C_9H_{15}O_4P$. Ethyl ester of α-furfurylphosphinic acid, preparation, properties, hydrolysis, 1242.

$C_9H_{15}O_5N$. Diethyl ester of N-acetamidomalonic acid, preparation, 2067.

$C_9H_{16}O_2N_2$. Diamide of 1-isopropylcyclobutane. d 3,3-dicarboxylic acid, preparation, properties, 2005.

$C_9H_{16}O_2S$. 1) 2,5-Dimethyltetrahydro-4-thiopyranol-4-acetic acid, preparation, properties, oxidation to sulfone, 905.
2) Sulfone formed by oxidizing a thiopyranol, 905.
3) Isomer of 2,5-dimethyltetrahydro-4-thiopyranol-acetic acid, preparation, oxidation to sulfone, 906.

$C_9H_{16}O_3S$. Isomer of sulfone formed by oxidizing thiopyranol, 906.

$C_9H_{17}OCl$. 1-Butoxy-5-chloropenten-3, reaction with potassium acetate, 1421; -3-chloropenten-4, reaction with potassium acetate, 1422.

$C_9H_{17}ON$. 1) 1,2,3,6-Tetramethyl-4-piperidone, preparation, properties, reaction with methylamine, 687.
2) 1-Propyl-2-methyl-4-piperidone, preparation properties, 1714.
3) 2-Methyl-5-dimethylamino-1-hexen-3-one, preparation, properties, formation of picrate, hydrogenation, 1836; -6-dimethylamino-2-hexen-4-one, preparation, properties, formation of picrate, hydrogenation, 1838.

$C_9H_{17}O_2Ag$. Silver salt of methylethylbutylacetic acid, formation, 643.

$C_9H_{18}O_2Br_2$. Dibromide of 1-butoxy-3-penten-5-ol, format formation, 1422; - of 1-butoxy-4-penten-3-ol, formation, properties, 1423.

$C_9H_{19}ON$. 1) 1,2,3,6-Tetramethyl-4-piperidol, preparation, properties, formation of picrate, picrolonate, 893.
2) 2,5-Dimethyl-6-ethyl-4-piperidol, preparation, properties, formation of picrate, 894.
3) 2-Methyl-5-dimethylaminohexan-3-one, preparation, properties, formation of picrate, 1837; -6-dimethylaminohexan-4-one, preparation, properties, formation of picrate, 1838.

$C_9H_{19}ON_3$. Semicarbazone of isopropylisobutylketone, formation, 1992.

$C_9H_{19}O_3N$. N-propanol-2-butoxy-3-acetamide, preparation, properties, 988.

$C_9H_{19}O_4P$. 1) 1-Methyl-1-diethylphosphobutanone-3, preparation, properties, 528.
2) Diisopropyl ester of 1-hydroxy-2-propene-1-phosphinic acid, preparation, properties, 534.
3) Ethyl ester of α-tetrahydrofurfurylphosphinic acid, preparation, properties, hydrolysis, 1242;

acid, formation, action of heat, 975.

$C_9H_{21}O_4IPNa$. Product of reaction of sodium iodide and the diisopropyl ester of ethoxymethylphosphinic acid, formation, 975.

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10. I

$C_{10}H_8$. Naphthalene, quantitative determination of disulfonic acids of, 1663; - hydrolysis of disulfonic acids, of, 1911; - properties of trisulfonyl chlorides of, 2091.

$C_{10}H_{14}$. 1) o-Cymene, preparation, properties, action of HCl, oxidation, 954; p-cymene, preparation, properties, oxidation, 954.

2) Butylbenzene, preparation, properties, oxidation, 844; - preparation, properties, 1020.

3) 4-Methylisopropenylcyclohexadiene-1,4, preparation, properties, bromination, isomerization, 953.

$C_{10}H_{16}$. 1) α-Pinene, Raman spectrum, 631.

2) Limonene, Raman spectrum, 631.

3) $\Delta^3$-Carene, Raman spectrum, 631.

4) Product of dehydration of dimethyl(1-methyl-cyclohexen-3-yl)-carbinol, 661.

5) α-Terpinene, preparation, action of chlorine, 861.

6) Alkyldipentene, preparation, properties, 1634.

7) α-Fenchene, action of chlorine on, 1863.

$C_{10}H_{18}$. 1) Mixture of 3-methyl-5-ethylheptadiene-3,5- and 3-methyl-5-ethylheptadiene-2,4, preparation, hydrogenation, 253.

2) Mixture of 3,4,5-trimethylheptadienes and 3,4-dimethyl-5-ethylhexadienes, preparation, hydrogenation, 255.

3) Spirocyclodecane, preparation, properties, formation of bromide, 1584.

4) 2,2,3,5-Tetramethylhexadiene-3,4, preparation, properties, 1843.

5) 2,2,3,3-Tetramethylhexyne-4, preparation, properties, 1843.

6) Product of reaction of 2,2,3-trimethyl-3-chlorohexyne-4 with $CH_3MgBr$, formation, properties, oxidation, 1846.

$C_{10}H_{20}$. 1) 4,4-Dimethyloctene-1. Preparation, properties, bromination, 636.

2) 5-Methylnonene-4, rearrangement of hydrogen over aluminosilicate catalysts, 1813.

3) Decene-1, rearrangement of hydrogen over aluminosilicate catalysts, 1813.

$C_{10}H_{22}$. 1) 3-Methyl-5-ethylheptane, preparation, properties, 253.

2) 3,4,5-Trimethylheptane, preparation, properties, Raman spectra, 254.

3) 4,4-Dimethyloctane, preparation, properties, 637.

10. II

$C_{10}H_6O_3$. 3-Hydroxy-1,4-naphthoquinone, formation, reaction, 747.

$C_{10}H_6O_4$. Isonaphthazarine, formation, 746.

$C_{10}H_8O$. β-Naphthol, coupling with m-aminophenyl-β-methylaminoethanol, 560; naphthol, bromination with dioxane dibromide, 1638.

$C_{10}H_6O_3$. Indanone-1-carboxylic acid-3, formation, 745.

$C_{10}H_8O_4$. o-Acetylphenylglyoxylic acid, formation, 740, 746.

$C_{10}H_9N$. 1) Lepidine, electrolytic reduction, in an acid medium, 1301; - chemical reduction, 2129.

2) β-Naphthylamine, alkylation with dialkylphosphoryl chlorides, 2095.

3) 3-Methylquinoline, preparation, 2259.

4) Quinaldine, preparation, formation of picrate, 2259.

$C_{10}H_{10}N_4$. Dimethyl-diimidazolo-1,2,4,5-benzene, preparation, properties, 1066; - diimidazolo-1,2,4,5-benzene, oxidation, halogenation, nitration, 1072.

$C_{10}H_{16}O$. 1) α-Tetralone, reduction to pinacol, 286.

2) Benzalacetone, reaction with dialkylphosphorous acids, 526.

$C_{10}H_{11}Br_7$. Heptabromide of spirocyclodecane, properties, 1583.

$C_{10}H_{11}N$. Dihydrolepidine, formation, 2130.

$C_{10}H_{12}O$. 1) p-Tolylacetone, reaction with ammoniacal $Ag_2O$, 1381.

2) Propyl and isopropylphenyl ketones, preparation, 1412.

3) Cuminol, inhibiting action on acidic corrosion, 1889.

4) Cumin aldehyde, inhibiting action on corrosion, 1893.

$C_{10}H_{12}O_2$. 1) Benzylacetylcarbinol, reaction with organomagnesium compounds, acetyl chloride, isomerization, 675.

2) Methylactolide of methylbenzoyl carbinol, 1197.

3) 2-Methoxy-6-allylphenol, preparation, γ-diethylaminopropyl ether, preparation, properties, 1689.

$C_{10}H_{12}O_3$. 1) 2,5-Dimethylphenoxyacetic acid, formation, 693; -formation, 1004.

2) 3,5-Xylenoxyacetic acid, condensation product of 3,5-dimethylphenol with monochloracetic acid and sodium, 693.

3) Methyl ether of methylbenzoylcarbinol, preparation, properties, formation of semicarbazone, 1203.

4) Hydrogenation product of 4-benzyloxy-2-hydroxystyryl methyl ketone, formation, 2053.

5) γ-Furyl-α-methylallyl acetate, preparation, properties, analysis, 2291.

- of α-tetrahydropyranphosphinic acid, preparation, hydrolysis, properties, 1244.

$C_9H_{20}O_4N$. N-propanol-2-butoxy-3-acetamide, preparation, properties, analysis, distillation in vacuo, 988.

$C_9H_{20}O_4N_4$. Alkaloid from Eremosparton flaccidum Litw, extraction, 414.

$C_9H_{21}O_4P$. Isopropyl ester of ethoxymethylphosphinic acid, preparation, properties, action of alkali metal halides, 973.

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$C_9H_6NSF_3$. 2-Methyl-5-trifluoromethylbenzthiazole, preparation, formation of methiodide, ethiodide, 2269.

$C_9H_6NS_2F_3$. 2-Methyl-6-trifluoromethylmercapto-benzthiazole, preparation, formation, of methiodide, 2275.

$C_9H_6O_2NCl$. 5-Chloro-8-hydroxyquinoline N-oxide, preparation, properties, 1270.

$C_9H_7N_2S_2F_3$. 6-Trifluoromethylmercapto-N-methylbenzthiazolonimine, preparation, 2276.

$C_9H_7O_2Cl_3Hg$. Orthotolylmercury trichloroacetate, synthesis, 115.

$C_9H_7O_2NS$. 2-Methyl-5-benzothiazole carboxylic acid, preparation, diazotization, 2270.

$C_9H_8NS_2F_3$. p-Thioacetylaminophenyltrifluoromethyl sulfide, preparation, oxidation, 2275.

$C_9H_8OClBr$. α-Bromoethyl-p-chlorophenyl ketone, reaction with sodium formate, 1426.

$C_9H_8O_2N_2S$. 4-Thiocyano-5-nitro-1,2-xylene, preparation, properties, reaction with sodium sulfite, 584.

$C_9H_9O_2BrHg$. Orthotolylmercury bromoacetate, synthesis, 115.

$C_9H_9O_2ClHg$. Orthotolylmercury chloroacetate, synthesis, 114.

$C_9H_9O_3NS$. 1) 3-Indolylmethanesulfonic acid, polarographic investigation, 929.

2) 2-Indolylmethanesulfonic acid, polarographic investigation, 930.

3) 2-Mercapto-4-acetaminobenzoic acid preparation, solubility, 1898.

4) 3-Methylindolsulfonic-2 acid, polarographic investigation, 927; 2-methylindolsulfonic-5 acid, polarographic investigation, 929.

$C_9H_9O_4NS$. 2-Ethylmercapto-4-nitrobenzoic acid, preparation, solubility, 1898.

$C_9H_9O_5NS$. 2-Ethylsulfoxide of 4-nitrobenzoic acid, preparation , solubility, 1899.

$C_9H_9O_6NS$. 2-Ethylsulfonyl-4-nitrobenzoic acid, preparation, solubility, formation of ethyl ester, 1899.

$C_9H_{11}ONCl_2$. m-Aminophenyl-β-(methylamino)-ethanol dichydrochloride, preparation, diazotization, 560.

$C_9H_{11}ONHg$. Tolylmercuryacetamide, preparation, reactions with HCl and NaI, properties, 701.

$C_9H_{11}O_2NS$. 1) Ethyl ester of 2-mercapto-4-aminobenzoic acid, preparation, properties, 1898.

2) 2-Ethylmercapto-4-aminobenzoic acid, preparation, 1899.

$C_9H_{11}O_2N_2Cl$. Hydrochloride of 4-acetamino-3-aminobenzaldehyde, formation, 1702.

$C_9H_{11}O_2N_3S$. Thiosemicarbazone of 2-hydroxy-4-methoxybenzaldehyde, preparation, 2050; - of 2-methoxy-4-hydroxybenzaldehyde, formation, 2051.

$C_9H_{11}O_2N_3S_2$. Thiosemicarbazone of p-methylsulfonylbenzaldehyde, formation, 1706.

$C_9H_{11}O_4NS$. p-Acetaminophenylsulfonylmethylol, preparation, properties, formation of acetic ester, reaction with aniline, 2-aminothiazole, 348.

$C_9H_{12}ON_4S$. 1) Thiosemicarbazone of 4-amino-2-methoxybenzaldehyde, formation, 1701.

2) 4-Amino-3-methoxybenzalthiosemicarbazone, formation, 1703.

$C_9H_{12}O_3NBr$. 4-Amino-2-hydroxyhydrocinnamic acid, hydrobromide, preparation, properties, 1703.

$C_9H_{12}O_3N_2S$. p-Acetaminophenyl aminomethane sulfone, preparation, properties, 350.

$C_9H_{12}O_4PNa$. Sodium salt of the methoxyethyl ester of phenylphosphinic acid, preparation, 319.

$C_9H_{13}O_2NS$. 2-Methylethanesulfanilide, preparation, properties, 1478.

$C_9H_{13}O_2N_4Cl$. 3-Hydroxy-4-methoxybenzalaminoguanyl hydrochloride, synthesis. 158.

$C_9H_{13}O_3NS$. Ethanesulfanisidide, preparation, properties, 1479.

$C_9H_{14}ON_2Cl_2$. 1) m-Amino-α-methylaminoacetophenone dihydrochloride, preparation, properties, 561.

2) N-Phenylglycineiminomethyl ether dihydrochloride, preparation, solubility, 2082.

$C_9H_{14}O_2NCl$. m-Hydroxyphenylmethylaminoethanol hydrochloride, preparation, properties, 561, 563.

$C_9H_{14}O_2N_2S$. 1) Butanesulfo-α-aminopyridide, preparation, properties, 1474.

2) 2-Methylpropanesulfo-α-aminopyridide, preparation, properties, 1475.

$C_9H_{16}ON_2Cl_2$. m-Amino-ω-benzylaminoacetophenone dihydrochloride, preparation, properties, 561.

$C_9H_{17}O_2NS$. Amide of 2,5-dimethyltetrahydro-4-thiopyranol-4-acetic acid, preparation, 905.

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$C_9H_6ONSF_3$. p-Acetaminophenyltrifluoromethylsulfide, preparation, 2275.

$C_9H_{21}O_4BrPLi$. Product of reaction of lithium bromide and the diisopropyl ester of ethoxymethylphosphinic acid, formation, 975.

$C_9H_{21}O_4ClPLi$. Product of reaction of lithium chloride and the diisopropyl ester of ethoxymethylphosphinic

$C_{10}H_{13}N$. 1) Ar- tetrahydro-2-naphthylamine, preparation, properties, formation of acetyl derivative, 1089.

2) Tetrahydrolepidine, formation, 2125, 2129.

$C_{10}H_{14}Br$. Bromination product of methylisopropenylcyclohexadiene, preparation, 953.

$C_{10}H_{14}N_2$. Ar-1,3-tetrahydronaphthalenediamine, preparation, 1091.

$C_{10}H_{14}O$. 1) 1-Methyl-4-(α-methoxyethyl)-benzene, preparation, properties, 1649; - (α-methoxyethyl)-benzene, preparation, properties, 1650.

2) 2-Phenylbutanol-2, preparation, properties, formation of phenylurethane, 1214.

3) Thymol, bromination with dioxane dibromide, 1637.

$C_{10}H_{14}O_2$. 1) Cis-1,6-diketodecalin, preparation, formation of disemicarbazone, isomerization, 517; Trans-1,6-diketodecalin, preparation, formation of disemicarbazone, 517.

2) n-Butylbenzene peroxide, preparation, properties, decomposition, 844.

3) Condensation product of 2-methylepoxy-1,2-hexen-5-yn-3 with acetone, formation, hydrolysis, 1626.

$C_{10}H_{14}O_3$. 1) 2,4-Dihydroxyphenylethylmethylcarbinol, preparation, properties, 2050.

2) Hydrogenation product of 4-benzyloxy-2-hydroxystyryl methyl ketone; formation, 2053.

$C_{10}H_{14}O_8$. 1,2,4,6-hexanetetracarboxylic acid, prepared from copolymer of butadiene and acrylonitrile, 1853; 1,2,5,6-hexanetetracarboxylic acid, preparation, properties, 1853; 1,3,4,6-hexanetetracarboxylic acid, preparation, 1853.

$C_{10}H_{15}Cl$. 1) 3-Chloro-$\Delta^4$-carene, conversion to alcohol, 865; - preparation, properties, 1487.

2) 4-Chlorodipentene, conversion to alcohol, 865.

3) 7-Chloro-α-pinene, conversion to the alcohol, 865.

4) d$\Delta^3$-Carene monochloride, preparation, properties, reduction, 1487.

5) Monochloride of α-fenchene, preparation, properties, action of potassium acetate, 1866.

6) Myrtenyl chloride, preparation of organomagnesium compounds, 1629; - reaction with cuprous cyanide, 1869.

$C_{10}H_{16}Cl_2$. 1) Chlorination product of α-terpinene, preparation, structure, ozonization, 863.

2) Carene dichloride, preparation, properties, regeneration of $\Delta^3$-carene, 1488.

$C_{10}H_{16}O$. 1) α-Decalone, reduction, 287.

2) α-Terpineol, synthesis and properties of some isomers, homologs and analogs of, based on 1,3-dienes, 653.

3) Product of saponification of myrtenyl acetate, 867.

4) Carenol, preparation, properties, formation of phenylurethane, 868.

5) Dipentenol-4, preparation, properties, structure, 868.

6) Dimethyl-(2-methylcyclohexadien-1,4-yl) carbinol, preparation, dehydration, 950.

7) Triallyl carbinol, preparation, properties, 1385.

8) Camphor, bromination with dioxane dibromide, 1641.

9) d-Fenchone, preparation, reduction 1865.

10) Fenchenol, preparation, properties, oxidation, 1867.

$C_{10}H_{16}O_2$. 1) Product of reaction of 2-methylepoxy-1,2-hexen-5-yne-3 with propyl alcohol, 2015; - 1,2-hexen-5-yn-3 and isopropyl alcohol, 2016.

2) Ozonide of acid obtained from myrtenyl cyanide, formation, 1870.

$C_{10}H_{16}O_4$. Cyclohexylidene diacetate, preparation, properties, conversion to cyclohexenyl-$\Delta_1$-acetate, 1206.

$C_{10}H_{18}$ 1) Product from distillation of dienes over sodium, 253.

2) Product from distillation of alkadienes over sodium, 254.

$C_{10}H_{18}O$. 1) Dimethyl-(1-methylcyclohexen-3-yl)-carbinol, preparation, properties, dehydration, 658; -(2-methylcyclohexen-3-yl)-carbinol, preparation, properties, dehydration, 658.

2) Ethyl-(4-methylcyclohexen-3-yl)-carbinol, preparation, properties, oxidation, 654; -(2-methylcyclohexen-3-yl)-carbinol, preparation, properties, oxidation, 655.

3) Methylethyl-(cyclohexen-3-yl)-carbinol, preparation, properties, dehydration, 653.

4) 4-Tert. butylcyclohexanone, condensation with enanthaldehyde, 1209.

5) Menthone, bromination with dioxane dibromide, 1641.

6) 1-Fenchyl alcohol, preparation, dehydration, 1863.

$C_{10}H_{18}O_4$. Sebacic acid, polyesterification with hexamethylene glycol, 1225.

$C_{10}H_{18}O_6$. Product of reaction of hydrogen peroxide with ozonide of dichloride of α-terpinene, 863.

$C_{10}H_{19}N$. γ,γ-Dimethylallylpiperidine, preparation, properties, formation of picrate, 673.

$C_{10}H_{20}Br_2$. 1,2-Dibromo-4,4-dimethyloctane, preparation, properties, 636.

$C_{10}H_{22}N_2$. 1) 1,2,5-Trimethyl-4-ethyliminopiperidine, preparation, 686.

2) 1,2,3,6-Tetramethyl-4-methyliminopiperidine, preparation, properties, hydrogenation, 687.

$C_{10}H_{20}O$. 1) 1-Methoxynon-3-en, preparation, properties, action of bromine, 1598.

2) Decaldehyde, bromination with dioxan dibromide, 1641.

$C_{10}H_{21}N$. Isoamylpiperidine, preparation, properties, formation of picrate, 673.

$C_{10}H_{22}N_2$. 1) 1,2,5-Trimethyl-4-ethylaminopiperidine, preparation, properties, formation of picrate, 686.

2) 1,2,3,6-Tetramethyl-4-methylaminopiperidine, preparation, properties, formation of dipicrate, 688.

$C_{10}H_{22}O_3$. 1-Methoxynon-3,4-diol, preparation, properties, 1599.

$C_{10}H_{24}O_2$. Benzoyl derivative of dimethylbutyl-p-hydroxyphenylmethane, preparation, 681.

10. III

$C_{10}H_5O_3Cl$. 2-Chloro-3-hydroxy-1,4-naphthoquinone, oxidation-reduction, hydrolytic transformations, 743.

$C_{10}H_6O_6S_2$. Sultones of 1-naphtholsulfonic acids, preparation of derivatives, 1669.

$C_{10}H_7BrHg$. Naphthylmercury bromide, reaction with thiosalicylic acid, 707.

$C_{10}H_7OBr$. 1-Bromonaphthol-2, preparation, 1638.

$C_{10}H_7ON$. Cinnamonitrile, preparation using acrylonitrile, 720.

$C_{10}H_7O_2N$. 1-Nitroso-2-naphthol, reaction with aniline, 570.

$C_{10}H_8N_4Br_2$. Dimethyl-3,6-dibromo-1,2,4,5-diimidazolobenzene, preparation, 1074.

$C_{10}H_8N_4Cl_2$. Dimethyl-3,6-Cl, 2,4,5-diimidazolobenzene dihydrochloride, preparation, 1074.

$C_{10}H_8O_2N_4$. Dimethyl-1,2,4,5-diimidazolo-3,6-benzoquinone, preparation, properties, solubility, 1072.

$C_{10}H_8O_6S_2$. Naphthalene disulfonic acids, preparation, quantitative determination, 1663; - disulfonic acids, hydrolysis, 1911.

$C_{10}H_8O_7S_2$. Naphthol disulfonic acids, (1,3,8,-1,4,8-, 2,6,8-, 2,3,6-) derivatives, preparation, properties, 1667.

$C_{10}H_8O_9S_3$. 1,3,6- and 1,3,7-naphthalene-trisulfonic acids, preparation of trisulfochlorides, 727.

$C_{10}H_8SO_3$. β-Naphthalenesulfonic acid, sulfonation, 353.

$C_{10}H_9ON$. 1) Cis-methoxymethylene-(phenyl)-acetonitrile, preparation, properties, saponification, 1659.

2) Transmethoxymethylene-(phenyl)-acetonitrile, preparation, properties, formation of cis-compound, saponification, 1659.

$C_{10}H_9O_2N_5$. Nitrodimethyldiimidazolobenzene, preparation, 1075.

$C_{10}H_{10}N_4Cl_4$. Dimethyl-3,6-dichloro-1,2,4,5-diimidazolobenzene dihydrochloride, preparation, conversion to base, 1074.

$C_{10}H_{10}O_4Hg_2$. Product of reaction of dimethylmercury and phthalic acid, 1183.

$C_{10}H_{11}NS$. 2,5,6-Trimethylbenzothiazole, preparation, 584; 2,6,7-, preparation, properties, formation of picrate, methiodide, ethiodide, 585; 2,4,5-preparation, picrate, formation of methyl methyl sulfate, methiodide, ethyl ethyl sulfate, ethiodide, 940; 2,4,6-, preparation, picrate, 941; 2,4,7-, preparation, picrate, 941; 2,5,7-, preparation, picrate, 941.

$C_{10}H_{11}ON$. 1) 1-Phenyl-pyrrolidone-2, preparation, properties, 575.

2) Hydroxydihydrolepidine, preparation, formation of picrate, 2127.

3) Indicain, isolation, formation of picrate, 2298.

$C_{10}H_{11}O_3N$. Plantagonin, isolation, properties, formation of hydrochloride, picrate, chloroaurate, methiodide, 2298.

$C_{10}H_{11}O_3Ag$. Silver salt of ethoxyphenylacetic acid, formation, 1875; - ethoxyphenylacetic acid, formation, 1877.

$C_{10}H_{11}O_5N$. N-Carbethoxy-p-aminosalicylic acid, preparation, solubility, 2071.

$C_{10}H_{12}N_4O_7$. Picrate of 1-amino-2-methylpropene-2, formation, 2179.

$C_{10}H_{12}O_2Hg$. Phenylmercury butyrate, preparation, action of alcoholic HCl, 1185.

$C_{10}H_{12}O_2S$. Dioxide of 2-methyl-5,8,9,10-tetrahydro-1-thiochromen-4-one, preparation, 1050; - 2-methyl-5,6,7,8-tetrahydro-1-thiochromen-4-one, preparation, condensation with divinyl, 1050.

$C_{10}H_{12}O_4N_4$. Methyl ethyl ketone 2,4-dinitrophenylhydrazone, preparation, 1627.

$C_{10}H_{13}O_6Ba$. Barium salt of α-furfurylphosphinic acid, preparation, 1242.

$C_{10}H_{12}O_6N_4$. N,N'-Diformylglycyldiketopiperazine, preparation, properties, condensation, 2215.

$C_{10}H_{13}NS$. 4-Thioacetylamino-1,2-xylene, preparation, oxidation, 582; 5 — 1,3-xylene, preparation, 940; 2 — 1,4-xylene, preparation, 940; 3 — 1,2-xylene, preparation, 940.

$C_{10}H_{13}OBr$. 4-Bromo-1-hydroxy-3-methyl-6-isopropylbenzene, preparation, 1637.

$C_{10}H_{13}ON$. 1) Ethylacetanilide, cyclization, 2257.

2) Propionyl-o-toluidine, cyclization, 2258.

$C_{10}H_{14}O_2N_4$. 8-Ethylcaffeine, preparation, 2281.

$C_{10}H_{14}O_2S$. 1) Dioxide of 2-methylhexahydro-1-thiochromen-4-one, preparation, condensation with divinyl, 1050.

2) Hydrogenation product of sulfone of thiochromanone, (unsaturated cis sulfone), preparation, 1287.

3) Product of hydrogenation of sultone, 1288.

4) 2-Methyl-5,8,9,10-tetrahydro-1-thiochroman-4-one dioxide, preparation, 1452.

$C_{10}H_{14}O_4N_2$. N-acetyl-2-hydroxy-4-methyl-5-carbethoxydihydropyrimidine, preparation, 1729.

$C_{10}H_{15}ClO_2$. Chloro ketoaldehyde from α-fenchene, formation, properties, 1866.

$C_{10}H_{15}MgCl$. Myrtenyl magnesium chloride, reaction with carbon dioxide, acetone, acetaldehyde, benzaldehyde, 1631.

$C_{10}H_{15}OBr$. d-Bromocamphor, preparation, 1642.

$C_{10}H_{15}O_2Cl$. Acetate of methyl-(4-chlorocyclohexen-3-yl)-carbinol, preparation, properties, 659.

$C_{10}H_{15}O_2N_5$. 8-Aminoethylcaffeine, preparation, formation of hydrochloride, methylation, 602.

$C_{10}H_{15}O_4N$. 1) ε-Succinimidocaproic acid, formation, 1313.

2) Ethyl ester of α-carbethoxy-γ-cyanbutyric acid, preparation, properties, 2032.

$C_{10}H_{15}O_4P$. Diester of α hydroxyalkylphosphinic acid, preparation, properties, 709.

$C_{10}H_{15}O_5P$. 1-Furyl-1-dimethylphosphobutanone-3, preparation, 529.

$C_{10}H_{14}O_2Cl_2$. Ozonation product of α-terpinene chlorination product, 863.

$C_{10}H_{16}O_3S$. 1) Cis-sulfone of hydrogenated thiochromanone, preparation, solubility, isomerization to trans sulfone, 1287.

2) 2-Methylhexahydro-1-thiochroman-4-one, dioxide, preparation, 1452.

$C_{10}H_{16}O_6Ag_2$. Silver salt of α-hydroxy acid obtained from α-terpinene dichloride via the ozonide, formation, 863.

$C_{10}H_{17}N_2Cl_2$. N-Phenyl-dimethylaminoacetamidine dihydrochloride, preparation, solubility, 2086; - aminoisobutyramidine dihydrochloride, preparation, solubility, 2087.

$C_{10}H_{17}OBr$. Bromomenthone, preparation, 1641.

$C_{10}H_{17}ON$. 2-Methyl-4-ketodecahydroquinoline, reduction, 895.

$C_{10}H_{17}ON_3$. Semicarbazide of fenchocamphorone, preparation, properties, 1867.

$C_{10}H_{18}ON_2$. Tetramethyldiaminodiphenylcarbinol, absorption spectrum, 886.

$C_{10}H_{18}O_3S$. Hydrogenation product of sulfone of thiochromanone, (cis sulfone), preparation, 1287.

$C_{10}H_{19}OCl$. 2-Butoxy-4-chlorohexene-5, preparation, properties, 839; - 6-chlorohexene-4, preparation, properties, 839; -4-chlorohexene-5, preparation, properties, 839.

$C_{10}H_{19}ON$. 1) 1,2,5-Trimethyl-6-ethyl-4-piperidone, preparation, properties, 689.

2) 2-Methyl-4-hydroxydecahydroquinoline, preparation, properties, 895; 3-Methyl-6-dimethylamino-2-hepten-4-one, preparation, properties, hydrogenation, 1839.

$C_{10}H_{19}O_4P$. 1-Diethylphosphohexadien-2,4-ol, preparation, properties, 535.

$C_{10}H_{19}O_7P$. Product of reaction of ethyl glycolate and ethoxydichlorophosphine, formation, properties, rearrangement, 980.

$C_{10}H_{20}OBr_2$. 1-Methoxy-3,4-dibromopropane, preparation, properties, 1598.

$C_{10}H_{20}O_6Ba$. Barium salt of α-tetrahydrofurfuryl-phosphinic acid, preparation, 1243; - of α-tetrahydropyranphosphinic acid, preparation, 1244.

$C_{10}H_{21}ON$. 3-Methyl-6-dimethylaminoheptan-4-one, preparation, properties, 1839.

$C_{10}H_{21}O_2N$. 1-Methoxy-2-methyl-5-dimethylaminohexan-3-one, preparation, properties, 1837.

$C_{10}H_{21}O_4P$. 1) Diester of α-hydroxyalkylphosphinic acid, preparation, properties, 709.

2) 3-Methyl-4-diethylphosphopentanone-2, preparation, properties, 1418.

$C_{10}H_{21}O_5P$. 1) Triethyl ester of β-phosphonobutyric acid, preparation, properties, saponification, 1191.

2) Ethyl ester of 4-phosphonomethyl-2,2-dimethyldioxolan-1,3, preparation, properties, hydrolysis, 1245.

3) 1-Dimethylphosphono-2-methyl-6-methoxyhexanone-3, preparation, properties, 1418.

$C_{10}H_{22}ON_2$. 1,5-Bis-dimethylaminohexan-3-one, preparation, properties, formation of picrate, 1838.

$C_{10}H_{23}O_2N$. Product of hydrogenation of 2-methylbutanol-2-one-3 oxime, 2173.

10. IV

$C_{10}H_4O_8S_4Cl_2$. 1,3,5,7-Naphthalenetetrasulfonyl chloride, properties, 2092.

$C_{10}H_5O_3S_2Cl$. Sultone sulfonyl chloride, preparation, properties, action of ammonia, 1669.

$C_{10}H_5O_6S_3Cl_3$. Naphthalene trisulfochloride, preparation, 727; -trisulfochlorides, solubility, thermal equilibrium of binary systems, 2091.

$C_{10}H_5O_7S_2Cl_3$. Trisulfonyl chloride of 2-naphthol-3, 6-disulfonic acid, preparation, properties, 1670.

$C_{10}H_6O_4S_2Cl_2$. 1,6-, 2,7-, 1,3-, 1,7-, naphthalene-disulfochlorides, chlorination, 727.

$C_{10}H_8O_4NBr$. β-Bromoethylphthalimide, condensation with di- and monoethylaniline, 326.

$C_{10}H_8O_2NS_2$. Thiophenesulfanilide, preparation, 192.

$C_{10}H_9O_3NS$. 1-Phenylpyrrolesulfonic acid, polarographic investigation, 923.

$C_{10}H_9O_4NS$. 1-Acetylindolesulfonic acid, polarographic investigation, 930; 3-, polarographic investigation, 930.

$C_{10}H_9O_5NS$. 2-Sulfo-3-indolylacetic acid, polarographic investigation, 927.

$C_{10}H_9O_6NS_2$. 1-Phenylpyrroledisulfonic acid, polarographic investigation, 923.

$C_{10}H_9O_7NS_2$. 1-Amino-8-naphthol-2,4-disulfonic acid, bisulfite compound, 983.

$C_{10}H_{10}ON_2S_2$. 5-(3'-Ethylthiazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 215.

$C_{10}H_{10}O_3NBr$. Ethyl ester of m-bromoxanilic acid, preparation, reaction with p-iodanisole and Mg, 360.

$C_{10}H_{10}O_6N_2S_2$. 1-Naphthol-3,8-disulfondiamide, preparation, 1669.

$C_{10}H_{11}ON_3S_3$. 5-(3'-Ethyl-5'-methylthiodiazolinylidene-2'-ethylidene)-thiazolidine-thion-(2)-one-(4). Synthesis, properties, 216.

$C_{10}H_{11}O_2NHg$. Phenylmercurydiacetamide, preparation, reactions with HCl, KI, properties, 702.

$C_{10}H_{11}O_4N_3S_2$. Thiosemicarbazone of benzaldehyde-p-sulfonylacetic acid, formation, 1708.

$C_{10}H_{12}ON_2S_3$. 5-(3'-Ethylthiazolidinylidene-2'-ethylidene)-thiazolidine-thion-(2)-one-(4), synthesis, properties, 216.

$C_{10}H_{12}O_2PCl_2$. Aniline salt of di-(α-chloroethyl) phosphinic acid, preparation, properties, 1582.

$C_{10}H_{13}N_2SI$. Ethiodide of 2-methyl-6-aminobenzothiazole ethylperchlorate, preparation, 376.

$C_{10}H_{13}ON_3S$. 4-Acetamino-3-aminobenzalthiosemicarbazone, formation, 1702.

$C_{10}H_{13}O_2NS$. 2,5-Dimethyltetrahydro-4-thiopyrylidencyanacetic acid, preparation, ozonation, decarboxylation, oxidation to sulfone, 902.

$C_{10}H_{13}O_2N_3S$. Thiosemicarbazone of 2,4-dimethoxybenzaldehyde, formation, 2052.

$C_{10}H_{13}O_2N_3S_2$. Thiosemicarbazone of p-ethylsulfonylbenzaldehyde, formation, 1707.

$C_{10}H_{13}O_4N_2Cl$. Methyl ester of p-nitrophenylalanine hydrochloride, preparation, action of ammonia, 1920.

$C_{10}H_{13}O_5NS$. γ-Lactam of α-carbethoxy-β-(4-carboxythiazolidyl-2)-propionic acid, preparation, properties, formation of sodium salt, heating in vacuo, 590.

$C_{10}H_{14}ON_5Cl$. p-Acetaminobenzalaminoguanyl hydrochloride, synthesis, 158.

$C_{10}H_{14}O_3BrS_2$. Dioxide of 3,5-dibromo-2-methylhexahydro-1-thiochroman-4-one, preparation, properties, removal of HBr, 1048.

$C_{10}H_{14}O_4NAg$. Silver salt of product of coupling of succinic acid and ε-caprolactam, 1313.

$C_{10}H_{14}O_4PNa$. Sodium salt of β-methoxyethyl-ester of benzylphosphinic acid, preparation, 312.

$C_{10}H_{15}O_2NS$. 2-Methylpropanesulfanilide, preparation, properties, 1479.

$C_{10}H_{15}O_3BrS$. Dioxide of 3-bromo-2-methylhexahydro-1-thiochroman-4-one, splitting off HBr, 1049.

$C_{10}H_{15}O_3NS$. 1) 2-Methylethanesulfanisidide, preparation, properties, 1479.

2) Ethanesulfophenetidide, preparation, properties, 1479.

$C_{10}H_{16}O_2N_2S$. 2-Methylbutanesulfo-α-aminopyridide, preparation, properties, 1475.

$C_{10}H_{16}O_4N_2S_2$. N$_4$-2-methylpropanesulfosulfanilamide, preparation, properties, 1475.

$C_{10}H_{16}O_3NBr$. Bromo-nor-caprylglycine ethyl ester, formation, properties, 2222.

$C_{10}H_{20}O_4NCl$. Diethyl iminodipropionate hydrochloride, preparation, 1674.

$C_{10}H_{30}O_{10}P_3Na_3$. Product of reaction of acetyl chloride and sodium di-β-methoxyethylphosphite, preparation, 2,4-dinitro-phenylhydrazine, 312.

$C_{10}H_{31}O_5N$. N,N-di(propanol-2-methoxy-3)-acetamid, synthesis, properties, 153.

$C_{10}H_{23}SNO_4$. N,N-di-(propanol-2-methoxy-3)ethanesulfonamide, synthesis, 154.

10. V

$C_{10}H_7ON_2S_2F_3$. Acetyl derivative of 2-amino-6-trifluoromethylmercaptobenzthiazole, preparation, 2276.

$C_{10}H_9NS_2F_3I$. 2-Methyl-6-trifluoromethylmercaptobenzothiazole methiodide, preparation, 2275.

$C_{10}H_{11}NSFI$. Ethiodide of 2-methyl-5-fluorobenzothiazole, preparation, 2271.

$C_{10}H_{12}O_3NAuCl_4$. Plantagonin chloroaurate, formation, 2298.

$C_{10}H_{13}O_4N_2SCl$. 2-Methyl-6-aminobenzothiazole ethylperchlorate, preparation, properties, absorption maximum, formation of ethiodide, 376.

Group $C_{11}$

11. I

$C_{11}H_{16}$. Methyl-dipentene, preparation, properties, 1633.

$C_{11}H_{18}$. 6-Alkyldipentene, preparation, properties, 1633.

$C_{11}H_{20}$. 1) Diisopropylmethylenecyclobutane, synthesis, properties, 139.

2) Mixture of 3-methyl-5-ethyloctadienes and 3-methyl-5-propylheptadienes, preparation, hydrogenation, 253.

$C_{11}H_{24}$. 3-Methyl-5-ethyloctane, preparation, properties, 253.

11. II

$C_{11}H_6O_2$ Condensation product of 2-methylepoxy-1,2-hexen-5-yn-3 with methyl ethyl ketone (dioxolane), formation, 1626.

$C_{11}H_{10}N_2$. α-Phenylglutarodinitrile, preparation, properties, conversion to 3-phenylpiperidine, 719.

$C_{11}H_{12}O$. 2-Phenylpenten-1-one-3, formation, oxidation, 1215.

$C_{11}H_{12}O_2$. ac-Tetrahydro-naphthoic acid, preparation, properties, derivatives, 385, 1489.

$C_{11}H_{12}O_3$. 1) 2,4,6-Trmethylphenylglyoxylic acid, preparation, 1408.

2) Ethoxymethylene-(phenyl)-acetic acid, preparation, properties, formation of nitrile, 1660.

3) Ar-2-Hydroxy-3-tetrahydronaphthoic acid, preparation, 1694.

4) 2-Methoxy-4-hydroxystyryl methyl ketone, preparation, formation of thiosemicarbazone, 2051.

$C_{11}H_{12}O_3$. Diacetyl derivative of hydrated hydroxyquinone, preparation, 736.

$C_{11}H_{14}O$. 1) Propyl and isopropyl-o-tolyl ketones, preparation, 1412.

2) Isobutylphenylketone, preparation, 1412.

3) Methylmesitylketone, preparation, 1413.

$C_{11}H_{14}O_2$. 2-Phenylpentanol-2-one-3, preparation, properties, formation of phenylurethane, oxidation, 1214.

$C_{11}H_{14}O_3$. 1) 2-Hydroxy-4-methoxyphenylethyl methyl ketone, preparation, properties, 2051.

2) 2-Methoxy-4-hydroxyphenylethyl methyl ketone, preparation, solubility, formation of thiosemicarbazone, 2051.

3) γ-Furyl-α-ethylallyl acetate, preparation, properties, 2291.

$C_{11}H_{14}O_4$. Addition product of maleic anhydride and 2-methoxyhexadiene-3,5, preparation, 840.

$C_{11}H_{14}S$. Phenyl cyclopentyl sulfide, constants, 162.

$C_{11}H_{15}Cl$. 2,3,5,6-Tetramethylbenzyl chloride, preparation, properties, action of sodium ethylate, 1647.

$C_{11}H_{15}N$. 1) 3-Phenylpiperidine, preparation, properties, formation of hydrochloride, urethane, 720.

2) Nitrile formed from 6-dichlorodipentene and cuprous cyanide, properties, saponification, 1870.

3) Nitrile formed from myrtenyl chloride and cuprous cyanide, properties, saponification, 1870.

$C_{11}H_{16}O$. 1) 9-Methyl-$\Delta^6$-octalone-1, reduction, 287.

2) Methyl-2,4,6-trimethylbenzyl ether, preparation, properties, 1648.

3) 1-Methyl-2-(α-ethoxyethyl)-benzene, preparation, properties, 1651.

4) 1-Methyl-4-(α-ethoxyethyl)-benzene, preparation, properties, 1651.

5) Hydrogenation product of methyl-p-tolylethinyl carbinol, formation, properties, 1443.

6) Methylethyl p-tolyl carbinol, preparation, properties, 1443.

$C_{11}H_{16}O_2$. 1) $\Delta^6$-Cis-6-methoxy-1-octalone, preparation, properties, reaction with semicarbazide acetate, hydrogenation, hydrolysis, isomerization, condensation with acetylene, 516.

2) Trans-$\Delta^6$-6-methoxy-1-octalone, preparation, condensation with acetylene, 517.

3) Phenyl isopropyl ethyl peroxide, preparation, properties, solubility, reduction, structure, 849.

4) Isosantenol acetate, preparation, properties, saponification, 869.

5) Product of reaction of benzylacetylcarbinol with methylmagnesium bromide, formation, oxidation, 876.

6) 2-Methyl-4-phenylbutanediol-2,3, formation, oxidation, 876.

7) Dioxolane, product of reaction of 2-methylepoxy-1,2-hexen-5-yn-3 with methylethyl ketone, 1626.

8) Condensation product of 3-methylepoxy-2,3-hepten-6-yn-4 with acetone, (dioxolane), preparation, properties, hydrolysis, 1627.

9) Acid formed from myrtenyl cyanide, properties, ozonization, 1870.

10) Acid formed by saponification of cyanodipentene, 1871.

11) 6-Dipentenylformic acid, preparation, properties, 1871.

12) γ-Furyl-α-n-butylallyl alcohol, preparation, properties, formation of acetate, 2291.

$C_{11}H_{16}O_3$. Dimethyl ketal of methylbenzoylcarbinol, preparation, properties, hydrolysis, conversion to cyclodimethyldilactolide of methylbenzoylcarbinol, 1201.

$C_{11}H_{18}O$. 1) Myrtenyl acetate, preparation, properties, saponification, 867.

2) Ether formed from chloroterpene, preparation, properties, 869.

$C_{11}H_{18}O_2$. 1) Cis-6-methoxy-1-decalone, preparation, 517.

2) Product of reaction of 2-methoxyepoxy-1, 2-hexen-5-yn-3 and n-butyl alcohol, 2016.

3) Product of reaction of 2-methylepoxy-1,2-hexen-5-yn-3 and n-butyl alcohol, 2015, with isobutyl alcohol, 2016; of 3-methylepoxy-2,3-2,3-hepten-6-yn-4 and propyl alcohol, 2017, with isopropyl alcohol, 2017.

$C_{11}H_{18}O_3$. Anhydride of α,α'-dimethyl-α-isobutylglutaric acid, preparation, properties, formation of acid, silver salt, 2025.

$C_{11}H_{20}$ Product from distillation of alkadienes over sodium, 253.

$C_{11}H_{20}O$. Dimethyl-(2,5-dimethylcyclohexen-3-yl)-carbinol, preparation, properties, dehydration, 660; -(3,4-dimethylcyclohexen-3-yl)-carbinol, preparation, properties, 660.

$C_{11}H_{20}O_3$. 1) Ethyl ester of γ-ethyl-γ-ethoxymethylcrotonic acid, preparation, properties, reaction ethyl malonate, 1934.

2) 1-Butoxy-3-penten-5-yl acetate, preparation, properties, addition of bromine, 1421; -4-penten-3-yl-acetate, preparation, properties, addition of bromine, 1421.

$C_{11}H_{20}O_4$. 1) Ethyl ester of β-keto-γ-ethoxymethylcaproic acid, preparation, properties, hydrogenation, 1934.

2) Dimethylisobutylglutaric acid, preparation, properties, action of heat, formation of silver salt, 2024.

$C_{11}H_{20}O_5$. β-(α'-Ethoxymetho)-propylglutaric acid, preparation, properties, reaction with HBr, 1935.

$C_{11}H_{20}O_{10}$. 1) Product of oxidation of the calcium salt of glucosido-2-galactonic acid, 170.

2) Glucosido-2-d-arabinose, synthesis, 176.

3) Galactosido-2-d-arabinose, preparation, properties, hydrazone, 301.

$C_{11}H_{20}S$. Cyclohexyl cyclopentyl sulfide, constants, 163.

$C_{11}H_{20}Si$. Triallylethylsilane, preparation, properties, 1507.

$C_{11}H_{21}Cl$. Chloride of 1,1-diisopropylcyclopentanol-2, synthesis, properties, 140.

$C_{11}H_{22}N_2$. β-Dibutylaminopropionitrile, preparation, properties, 2032.

$C_{11}H_{22}O$. Diisopropylcyclobutylcarbinol, synthesis, properties, 137; 1,1-diisopropylcyclopentanol-2, synthesis, properties, 137.

$C_{11}H_{22}O_3$. 2,2-Diisopropylglutaric acid, synthesis, properties, 138.

$C_{11}H_{22}O_4$. Ethyl ester of β-hydroxy-γ-ethoxymethylcaproic acid, preparation, properties, acetylation, 1934.

$C_{11}H_{23}O_4$. Diisobutyl ester of 1-hydroxy-2-propene-1-phosphinic acid, preparation, properties, 534.

## 11. III

$C_{11}H_9N_3O_5$. Compound of 2,4-dinitrophenol and pyridine, 2146.

$C_{11}H_9OBr$. 1-Bromo-2-methoxynaphthalene, preparation, 1638.

$C_{11}H_9O_4N$. β-Phthaloylaminopropionic acid, preparation, 1674.

$C_{11}H_{10}N_2O_3$. Compound of p-nitrophenol and pyridine, formation, 2145

$C_{11}H_{10}O_4Hg$. Orthotolylmercury fumarate, 116.

$C_{11}H_{10}O_6N_2$. 5,7-Dinitro-ac-tetrahydro-1-naphthoic acid, preparation, properties, oxidation, formation of ethyl ester, reaction with thionyl chloride, reduction formation of acetyl compound, decarboxylation, 1090.

$C_{11}H_{11}OCl$. 1) ac-α-Tetrahydronaphthoyl chloride, preparation, formation of amide, dimethylaminoethyl ester, diethylaminoethyl ester, isopropylaminoethyl ester, 386.

2) Acid chloride of ac-β-tetrahydronaphthoic acid, preparation, formation of amide, dimethylaminoether ester (hydrochloride), diethylaminoethyl ester (hydrochloride), isopropylaminoethyl ester (hydrochloride), 389.

3) Methyl-p-chlorobenzoyl carbinol acetate, methanolysis, 1426.

$C_{11}H_{11}ON$. Ethoxymethylene-(phenyl)-acetonitrile, preparation, properties, formation of silver salt, 1659.

$C_{11}H_{11}O_2N$. 8-Ethoxyquinoline N-oxide, preparation, properties, 1269.

$C_{11}H_{11}O_4N$. 7-Nitro-ac-tetrahydro-1-naphthoic acid, preparation, esterification, 1086; 5- — -ac-tetrahydro-1-naphthoic acid, preparation, formation of ethyl ester, reaction with thionyl chloride, 1086; 6- — -2-acetyl-tetrahydro-2-naphthoic acid, preparation, properties, formation of ethyl ester, acid chloride, acid amide, 1489.

$C_{11}H_{12}N_4O_3$. Picrate of diacetylguanidine, preparation, 606.

$C_{11}H_{12}OS$. ac-α-Tetrahydrothionaphthoic acid, preparation, formation of ethyl ester, diethylaminoethyl ester, 387; -β-acid, preparation, formation of ethyl ester, acid chloride, amide, 388; -β-acid, preparation, formation of ethyl ester, γ-diethylaminopropyl ester, 390.

$C_{11}H_{12}O_3N_2$. 1) 6-Nitro-ac-tetrahydro-2-naphthoic acid amide, preparation, properties, reduction, 1490.

2) 3,4-Diacetaminobenzaldehyde, preparation, properties, 1702.

$C_{11}H_{12}O_4N_4$. β-(Caffeine-8)-acrylic acid, preparation, formation of ethyl ester, hydrogenation, 595.

$C_{11}H_{13}ON$. ac-α-Tetrahydronaphthamide, preparation, 386; ac-β-tetrahydronaphthamide, preparation, 389.

$C_{11}H_{13}O_2N$. 1) 5-Amino-ac-tetrahydro-1-naphthoic acid, preparation, formation of acetyl derivative, ethyl ester, diethylamine ester (hydrochloride), 1088; 7- -ac-tetrahydro-1-naphthoic acid, preparation, solubility, formation of acetyl derivatives, ethyl ester, decarboxylation, formation of diethylaminoethyl ester, 1089; 6- -ac-tetrahydro-2-naphthoic acid, preparation, properties, decarboxylation, acetylation, 1490.

2) Anilide of α-hydroxyallylacetic acid, formation, 1395.

3) Ethyl aminomethylene-(phenyl)-acetate, preparation, 1660.

$C_{11}H_{13}O_3Cl$. 4-Chloromethyl-2-anisyl-dioxolan-1,3, preparation, properties, 1246.

$C_{11}H_{14}O_2Hg$. Orthotolylmercury butyrate, 114.

$C_{11}H_{14}O_2N_2$. 5,7-Diamino-ac-tetrahydro-1-naphthoic acid, preparation, properties, formation of acetyl compound, 1091.

$C_{11}H_{14}O_2N_4$. Caffeine-cyclopropane, preparation, solubility, 2282.

$C_{11}H_{14}O_2S$. 1) Dioxide of 2,10-dimethyl-5,8,9,10-tetrahydro-1-thiochromen-4-one, preparation, 1050.

2) p-Butylsulfonylbenzaldehyde, preparation, properties, 1707.

$C_{11}H_{14}O_4Ag$. Silver salt of 1-methyl-1-ethylcyclohexene-2-dicarboxylic acid, formation, properties, 668.

$C_{11}H_{14}O_4N_4$. β-(Caffeine-8)-propionic acid, preparation, properties, derivatives, 596.

$C_{11}H_{15}O_2N$. 1) Cyclohexenylcyanoacetic ester, quantitative determination, reaction with acetylmethylurea, 909.

2) 2,6,6-Trimethyl-7-oxa-4-ketodecahydroquinoline, preparation, properties, 1457.

$C_{11}H_{15}O_2N_3$. 3-Methyl-4-imino-5-cyclohexenyl-barbituric acid, preparation, properties, methylation, heating with HCl, formation of sodium salt, 911.

$C_{11}H_{15}O_3N_5$. β-(Caffeine-8)-propionamide, preparation, properties, 597.

$C_{11}H_{15}O_4P$. Dimethyl ester of 1-hydroxy-3-phenyl-2-propene-1-phosphinic acid, preparation, properties, saponification, 535.

$C_{11}H_{16}O_2N_4$. 8-Propylcaffeine, preparation, 2282.

$C_{11}H_{16}O_3N_4$. 8-(3-hydroxypropyl)-caffeine, preparation, formation of acetate, reaction with thionyl chloride, 2281.

$C_{11}H_{12}O_3S$. 1) Dioxide of 2,10-dimethyl-5,8,9,10 tetrahydro-1-thiochroman-4-one, preparation, 1050.

2) Stereoisomer of the dioxide of 2,10-dimethyl-5,8,9,10-tetrahydro-1-thiochroman-4-one, preparation, 1050.

$C_{11}H_{17}ON$. 1,2-Dimethyl-4-vinylethyl-4-piperidol, preparation, properties, formation of hydrochloride, hydrogenation, 1713.

$C_{11}H_{17}O_2N_3$. Monosemicarbazone of trans-1,6-ketodecalin, preparation, 517.

$C_{11}H_{17}O_2N_5$. 8-Dimethylaminomethylcaffeine, preparation, formation of hydrochloride, 601.

$C_{11}H_{17}O_4P$. Diester of $\alpha$-hydroxyalkylphosphinic acid, preparation, properties, 709.

$C_{11}H_{17}O_5P$. Addition product of diethylphosphorous acid and furylacrolein, preparation, properties, 534.

$C_{11}H_{18}O_2S$. Dehydration product of ethyl ester of 2,5-dimethyltetrahydro-4-thiopyranol-4-acetic acid, preparation, properties, 906.

$C_{11}H_{18}O_3S$. Hydrogenation product of sulfone of thiochromanone, preparation, 1288.

$C_{11}H_{18}O_4Ag_2$. Silver salt of dimethylisobutylglutaric acid, formation, 2025.

$C_{11}H_{19}N_3Cl_2$. N-Phenyl-$\beta$-dimethylamino-propylamidine-dihydrochloride, preparation, solubility, 2088.

$C_{11}H_{19}ON$. 1,2-Dimethyl-4-ketodecahydroquinoline, preparation, properties, reaction with methylamine, 688.

$C_{11}H_{19}O_4Br$. $\delta$-Bromobutyl malonic ester, preparation, properties, 1996.

$C_{11}H_{20}O_2S_2$. Methoxypentenylbutylxanthogenate, preparation, properties, 1602.

$C_{11}H_{20}O_3Br_2$. 1-Butoxy-3-penten-5-yl dibromide, formation, properties, 1422; 1- -4-penten-3-yl dibromide, formation, properties, 1422.

$C_{11}H_{20}O_3S$. Ethyl ester of 2,5-dimethyltetrahydro-4-thiopyranol-4-acetic acid, preparation, properties, oxidation, formation of amide, saponification, 904.

$C_{11}H_{20}O_5S$. Sulfone formed by oxidizing thiopyranol, 905.

$C_{11}H_{21}ON$. 2-Methyl-6-ethyl-5-propyl-4-piperidone, reduction, 894.

$C_{11}H_{23}ON$. 1) 2-Methyl-6-ethyl-5-propyl-4-piperidol, preparation, formation of picrate, 894.

2) Butylpiperidol, preparation, 1713.

$C_{11}H_{23}O_4P$. 1) Dibutyl ester of 1-hydroxy-2-propene-1-phosphinic acid, preparation, properties, 534.

2) Diester of $\alpha$-hydroxyalkylphosphinic acid, preparation, properties, 709.

3) Butyl ester of ethoxymethylphosphinic acid, preparation, properties, action of alkali metal halides, 973.

$C_{11}H_{23}O_5P$. 1) Ester formed from sodium derivative of dipropylphosphorous acid n-propyl chloroacetate, 960.

2) Product of rearrangement of dipropyl-(carbopropoxymethyl) phosphite, formation, properties, 979.

3) Dipropyl-(carbopropoxymethyl) phosphite, preparation, properties, reaction with bromine, 980.

$C_{11}H_{24}O_6P_2$. 1,2-Di-(diethylphosphono)-propane preparation, properties, 2109.

11. IV.

$C_{11}H_9O_5N_2Cl$. 5,7-Dinitro-ac-tetrahydro-1-naphthoyl chloride, preparation, solubility, 1091.

$C_{11}H_{10}O_3NCl$. 5-Nitro-ac-tetrahydro-1-naphthoyl chloride, preparation, properties, formation of diethylaminoethyl ester, 1087; 7- -ac-tetrahydro-1-naphthoyl chloride, preparation, solubility, 1087.

$C_{11}H_{10}O_5N_2Cl_2$. p-Nitro-N-dichloroacetylphenylalanine, preparation, hydrogenation, 1920.

$C_{11}H_{11}NSF_3$. Ethiodide of 2-methyl-5-trifluoromethylbenzothiazole, preparation, 2270.

$C_{11}H_{11}O_3NS$. 1) 5-Nitro-ac-tetrahydro-1-thionaphthoic acid, preparation, properties, formation of ethyl ester, 1092; 7- -ac-tetrahydro-1-thionaphthoic acid, preparation, solubility, formation of ethyl ester, diethylamino ester, (hydrochloride), preparation, properties, 1092.

2) 1-Phenyl-2-methylpyrrolesulfonic acid, polarographic investigations, 924.

3) 1-o-Tolylpyrrolesulfonic acid, polarographic investigation, 924.

$C_{11}H_{12}O$. Methyl-p-tolylethinyl carbinol, preparation, properties, catalytic hydrogenation, 1442.

$C_{11}H_{12}O_3N_2Cl_2$. p-Amino-N-dichloroacetylphenylalanine, preparation, 1920.

$C_{11}H_{13}O_2N_2S_2$. p-Aminophenyl (2'-amino-4'-methylthiazolyl)methane sulfone, preparation, properties, 349.

$C_{11}H_{13}O_4NS$. 2-Ethylmercapto-4-nitrobenzoic acid, preparation, solubility, hydrogenation, 1899.

$C_{11}H_{13}O_4N_4Na$. Sodium $\beta$-(caffeine-8)-propionate, preparation, 596.

$C_{11}H_{13}O_5NS$. Acetic ester of p-acetaminophenylsulphfonylmethylol, preparation, properties, 348.

$C_{11}H_{13}O_6NS$. Ethyl ester of 2-ethylsulfonyl-4-nitrobenzoic acid, preparation, solubility, 1900.

$C_{11}H_{14}NSI$. Methiodide of 2,5,6-trimethylbenzothiazole, preparation, 585; - of 2,6,7-trimethyl-

benzothiazole, preparation, 585; - of 2,4,5-trimethylbenzothiazole, formation, 941.

$C_{11}H_{14}O_2N_4S$. 4-Acetamino-2-methoxybenzalthiosemicarbazone, formation, 1701; -3-methoxybenzalthiosemicarbazone, formation, 1703.

$C_{11}H_{15}O_2N_4Cl$. 8-(3-chloropropyl)-caffeine, preparation, reaction with diethylamine, Raney nickel, sodium ethylate, 2282.

$C_{11}H_{15}O_4NS$. Ethyl ester of 2-ethylsulfonyl-4-aminobenzoic acid, preparation, solubility, 1900.

$C_{11}H_{16}O_3N_2S_3$. S-(α-naphthyl)-thiuronate. Preparation, 191.

$C_{11}H_{17}O_2NS$. 2-Methylbutanesulfanilide, preparation, properties, 1479.

$C_{11}H_{17}O_3NS$. 1) 2-methylethanesulfophenetidide, preparation, properties, 1479.

2) 2-Methylpropanesulfanisidide, preparation, properties, 1479.

$C_{11}H_{18}O_2N_2S$. p-Aminophenyl (diethylamino) methane sulfone, preparation, properties, 350.

$C_{11}H_{20}O_5NP$. Ethyl ester of diethylphosphon-(α-cyanethyl)-acetic acid, preparation, properties, 2184.

$C_{11}H_{24}O_3NP$. Ethyl ester of N-(β-phosphonoethyl)-piperidine, preparation, properties, hydrolysis, action of ethyl iodide and bromide, 1248.

11. V.

$C_{11}H_{25}O_4BrPLi$. Product of reaction of lithium bromide and the dibutyl ester of ethoxymethylphosphinic acid, formation, 973.

$C_{11}H_{25}O_4IPLi$. Product of reaction of lithium iodide and the dibutyl ester of ethoxymethylphosphinic acid, formation, 975.

$C_{11}H_{28}O_3P_2Na_2I$. Product of reaction of allyl iodide and sodium diethylphosphite, 319.

Group $C_{12}$

12. I

$C_{12}H_{10}$. Diphenyl, preparation, 834.

$C_{12}H_{14}$. Methylphenylmethylenecyclobutane, synthesis, properties, 145.

$C_{12}H_{18}$. 1) Di-Δ'-cyclohexenyl, condensation with α,β-unsaturated cyclic ketones, 281.

2) Ethyldipentene, preparation, properties, 1634

$C_{12}H_{20}$. 6-Alkyldipentene, preparation, properties, 1633

$C_{12}H_{22}$. 1) Mixture of 3-methyl-5-ethyl-nonadienes and 3-methyl-5-butylheptadienes preparation, hydrogenation, 254.

2) 3,6-Diethyloctadiene-3,5-formation, 408.

$C_{12}H_{24}$. 1) 3,5-Dimethyl-5-ethyloctene-3, preparation, properties, oxidation, bromination, catalytic hydrogenation, 642.

2) 3,5,6-Trimethyl-5-ethylheptene-3, preparation, properties, oxidation, bromination catalytic hydrogenation, 642.

$C_{12}H_{26}$. 1) 3-Methyl-5-ethylnonane, preparation, properties, 254.

2) 2,3,5-Trimethyl-3-ethylheptane, preparation, properties, 644.

3) 3,5-Dimethyl-5-ethyloctane, preparation properties, structure, 644

12. II.

$C_{12}H_8N_2$. Phenazine, mechanism of Wohl reaction for preparation of, 565.

$C_{12}H_{10}Hg$. Diphenylmercury, reaction of, with metallic chlorides that do not form stable organometallic compounds, 547; - reaction with amides of fatty acids, 701; - reaction with thiosalicyclic acid, 705; - reaction with methyl acetate and propyl butyrate, 1185.

$C_{12}H_{10}O$. Methyl-α-naphthylketone, preparation, 1413.

$C_{12}H_{10}O_3$. 2,3-Dimethyl-1,4-naphthoquinone oxide, preparation, properties, structure, 506.

$C_{12}H_{10}O_4$. Product of cyclization of 1,3-di-β-carboxyethoxybenzene, 1687.

$C_{12}H_{11}Br$. β-(2-naphthyl)-ethyl bromide, preparation, formation of malonate, 1468.

$C_{12}H_{11}N$. 1) Diphenylamine, formation, 918; -alkylation with dialkylphosphoryl chlorides, 2095.

2) Methylphenylpyridine, formation, 2020.

$C_{12}H_{12}N_2$. Benzidine, reaction with alkanesulfochlorides, 1471.

$C_{12}H_{12}O$. 1) β-(2-Naphthyl)-ethyl alcohol, preparation, formation of bromide, 1467.

2) 2,3-Dimethyl-5-phenylfuran, preparation, properties, reaction with maleic anhydride, 1613.

$C_{12}H_{12}O_5$. Monoketone obtained by cyclization of 1,3-di-β-carboxyethoxybenzene, 1687.

$C_{12}H_{14}O_2$. 1) 3-Methyl-5-phenyl-pentyn-4-diol-2,5, preparation, properties, fusion with potassium carbonate, action of mercuric chloride, 1612

2) 1,1-Phenylcyclopentane carboxylic acid, preparation, properties, formation of nitrile, acid chloride, potassium salt, 2248.

$C_{12}H_{14}O_3$. 1) Acetic ether of benzylacetylcarbinol, preparation, properties, structure, reaction with methylmagnesium bromide, 876.

2) 2,3,5,6-Tetramethylphenylglyoxylic acid, preparation, properties, 1409.

3) Methyl ester of 2-hydroxy-3-tetrahydronaphthoic acid, preparation, 1694.

$C_{12}H_{14}O_4$. Product of saponification of 1,2-di-β-

carboxyethoxybenzene by HCl, 1686; - of 1,3-di-β-cyanoethoxybenzene with HCl, 1686; - of 1,4-di-β-cyanoethoxybenzene with HCl, 1687.

$C_{12}H_{16}O$. 1) Isobutyl-o-tolylketone, preparation, 1412; -p-tolylketone, preparation, 1412.

2) Methylphenylcyclobutylcarbinol, synthesis, properties, 146.

3) 2-Methyl-4-phenyl-2-penten-4-ol, preparation, properties, oxidation, 1438.

$C_{12}H_{16}O_2$. 1) 1-Ethinyl-6-ketodecalol, preparation, properties, semicarbazone, 518.

2) Tetralyl ethyl peroxide, preparation, properties, solubility, reduction, structure, 848.

3) 2-Methyl-4-phenyl-2-penten-4-ol oxide, preparation, properties, 1437.

$C_{12}H_{16}O_3$. 1) Methyl ester of 2,4,6-trimethylmandelic acid, preparation, formation of 2,4,6-trimethylphenylglyoxylic acid, 1408.

2) 2,4-Dimethoxyphenylethyl methyl ketone, formation, 2052.

$C_{12}H_{17}N$. Phenylcyclohexylamine, hydrolysis, 916; - reaction with furanidine, 916.

$C_{12}H_{18}O$. 1,3,5-Trimethyl-6-(α-methoxyethyl)-benzene, preparation, properties, 1650.

$C_{12}H_{18}O_2$. 1) Carenyl acetate, preparation, properties, saponification, 868.

2) Dipentenylacetic acid, preparation, 1000.

3) 4-Dioxolane, product of reaction of 3-methylepoxy-2,3-hepten-6-yn-4 with methylethyl ketone, 1627.

4) Condensation product of 3-methylepoxy-2,3-hepten-6-yn-4 with methyl ethyl ketone (dioxolane), hydrolysis, 1627.

5) 1,3,5-Trimethyl-6-(α-methoxyethyl)-benzene, preparation, properties, 1650.

6) 2,7-Dimethyl-2,7-dimethoxyoctadiyne-3,5, preparation, properties, oxidation, structure, 2205.

$C_{12}H_{20}O$. Product of reaction of myrtenyl magnesium halide and acetaldehyde, formation, properties, 1631.

$C_{12}H_{20}O_2$. Product of reaction of 3-methylepoxy-2,3-hepten-6-yn-4 and n-butyl alcohol, 2017.

$C_{12}H_{22}$ Product from distillation of alkaldienes over sodium, 254.

$C_{12}H_{23}N_3$. 1,2-Dimethyl-4-methyliminodecahydroquinoline, preparation, properties, formation of picrate, hydrogenation, 688.

$C_{12}H_{22}O$. 1) 2,7-Dimethyl-7-ethoxyoctadiyne-2,4, formation, properties, 2200.

2) Hydrogenation product of 2,7-dimethyl-2,7-diethoxyoctadiyne-3,5, preparation, properties, oxidation, structure, 2200.

$C_{12}H_{22}O_2$. 1-Methoxy-6-β-methoxyethyloct-3,7-dien, preparation, properties, 1597.

$C_{12}H_{22}O_3$. Methoxymethylisopropylmalonic ester, preparation, properties, saponification, 2002.

$C_{12}H_{22}O_{11}$. 1) Galactosido-3-mannose, formation, properties, 299; -3-glucose, isomerization, 299.

2) β-(1,5)-glucosido-2(1,5)-galactose, synthesis, properties, 170.

3) Octaacetate of glucoside-3-mannose, synthesis, 175.

4) Disaccharide, preparation, properties, 300.

5)(1,5)-Mannosido-2-(1,5)-mannose, preparation, properties, oxidation, methylation, 303; 305; -

6) Mannosido-2-mannonic acid, preparation, oxidation, calcium salt, 306.

$C_{12}H_{22}O_{12}$. Galactosido-3-mannonic acid, calcium salt, formation, properties, oxidation, 300.

$C_{12}H_{23}Br$. 1) Bromination product of 3,5,6-trimethyl-5-ethylpentene-3, 643.

2) 4-Bromo-3,5-dimethyl-5-ethyloctene-3, formation, properties, 643.

$C_{12}H_{23}N$. Dicyclohexylamine, hydrolysis, 916.

$C_{12}H_{24}N_2$. 1,2-Dimethyl-4-methylaminodecahydroquinoline, preparation, properties, formation of dipicrate, 689.

$C_{12}H_{24}O$. 2,2,5,5-Tetraethylfuranidine, preparation, catalytic dehydration, properties, 405.

12. III.

$C_{12}H_8O_2N_2$. 1,5-Dihydroxyphenazine, preparation, formation of diacetyl derivative, 765; 1,6- preparation, formation of diacetyl derivative, 766; 1,8- , preparation, formation of diacetyl derivative, 766.

$C_{12}H_{10}O_7N_4$. Nitration product of 2-hydroxy-4-methyl-5-carbethoxy-6-phenyl-dihydropyrimidine, preparation, solubility, 1730.

$C_{12}H_{11}O_2N$. 2-Phenyl-4-isopropylidene-5-oxazolone, reaction with thioacetic acid, 321.

$C_{12}H_{11}O_{16}Bi_3$. Dibismuth salt of bismuthodicitric acid, formation, solubility, 1980.

$C_{12}H_{12}O_2S$. Diphenylsulfonamide, use in phenylamidation of carboxylic acids, 1653.

$C_{12}H_{12}O_4Cl_2$. Product of reaction of thionyl chloride with 1,3-di-β-carboxyethoxybenzene, 1686; of thionyl chloride with 1,4-di-β-carboxyethoxybenzene, 1687.

$C_{12}H_{12}O_6N_4$. (Caffeine-8)-methylenemalonic acid, preparation, properties, preparation of diethyl ester, reaction with quinoline, 595.

$C_{12}H_{13}N_3S_2$. 2-Methyl-6-(N-allylthiocarbamide-N')-benzothiazole, preparation, properties, absorption maximum, 376.

$C_{12}H_{13}OCl$. 1,1-Phenylcyclopentane carboxylic acid chloride, preparation, 2248.

$C_{12}H_{13}ON$. 1) 8-Isopropoxyquinoline, preparation, properties, hydrochloride, 1266.

2) 8-Propoxyquinoline, preparation, formation of hydrochloride, 1266.

$C_{12}H_{15}O_2N$. 1) 8-Isopropoxyquinoline N-oxide, hydrochloride, preparation, properties, 1271.

2) 8-Propoxyquinoline N-oxide, hydrochloride, preparation, properties, 1271.

$C_{12}H_{15}O_2Na$. Sodium salt of 1,1-phenylcyclopentane carboxylic acid, formation, 2248.

$C_{12}H_{15}O_4N$. 1) Ethoxymethylenehippuric acid, preparation, action of alkali, absolute alcohol and sodium ethoxide, formation of 2-phenyl-4-ethoxymethyleneoxazolinone-(5) from, 936.

2) 4-Acetamino-2-methoxycinnamic acid, preparation, hydrogenation, 1703.

$C_{12}H_{15}O_5N$. 4-Succinylamino-2-methoxy-benzaldehyde, formation, 1702; -3-methoxy-benzaldehyde, preparation, formation of thiosemicarbazone, 1702.

$C_{12}H_{14}N_2Cl_2$. Benzidine hydrochloride, preparation, 1471.

$C_{12}H_{14}OS$. 1,1-Phenylcyclopentanethiocarboxylic acid, preparation, properties, formation of acid chloride, potassium salt, sulfide, disulfide, ethyl ester, hydrochloride of diethylaminoethyl ester, hydrochloride of diethylaminopropyl ester, 2249.

$C_{12}H_{14}O_3N_2$. Acetyl-(6-nitro-ac-tetrahydro-2-naphthylamine), preparation, properties, reduction + acetylation, 1491.

$C_{12}H_{14}O_4Hg$. Orthoditolylmercury glutarate, 115

$C_{12}H_{14}O_6N_4$. (Caffeine-8)-isosuccinic acid, preparation, properties, formation of diethyl ester, 596.

$C_{12}H_{14}O_6S$. p-Methylsulfonylbenzaldehyde, diacetate, preparation, formation of aldehyde, 1706.

$C_{12}H_{15}OCl$. Cyclohexyl-p-chlorophenyl ether, 2045.

$C_{12}H_{15}ON$. 1) Acetyl derivative of ar-tetrahydro-2-naphthylamine, preparation, 1089;

2) 1-Phenyl-2-methyl-4-piperidone, preparation, properties, 1713.

$C_{12}H_{15}ON_3$. Semicarbazone of 2-phenyl-cyclopentanone, preparation, 272.

$C_{12}H_{15}O_2N$. Ethyl ester of α-phenylethyloxamic acid, preparation, properties, 761; - of β-phenylethyloxamic acid, preparation, properties, intramolecular condensation, 762.

$C_{12}H_{15}O_4N$. 1) Monobenzoyl derivative of α-hydroxy-β-aminoisovaleric acid, preparation, 1617.

2) 4-Acetamino-2-methoxyhydrocinnamic acid, preparation, action of HBr and ethyl acetate, 1703.

$C_{12}H_{15}O_5N$. N-Carbethoxy-p-aminosalicylic acid ethyl ester, preparation, solubility, 2072.

$C_{12}H_{16}N_2O_3$. Monobenzoyl derivative of α-hydroxy-β-aminoisovaleric amide, preparation, reaction with sodium nitrite, 1617.

$C_{12}H_{16}O_4N_4$. 1) Methyl ester of β-(caffeine-8)-propionic acid, preparation, 596;

2) Methylisobutyl ketone 2,4-dinitrophenylhydrazone, formation, 1628.

$C_{12}H_{17}O_3N$. Isoamyl ester of p-aminosalicylic acid, preparation, 2070.

$C_{12}H_{17}O_4P$. 1-Phenyl-1-dimethylphosphobutanone-3, preparation, 529.

$C_{12}H_{17}O_6Cl$. 1-Chloro-3,4,6-triacetylgalactose, synthesis, properties, 169; -3,4,6-triacetylmannose preparation, properties, 304.

$C_{12}H_{18}O_2$. Fenchyl acetate, preparation, properties, saponification, 1866.

$C_{12}H_{18}O_6N_2$. 1) Mannonolactone, phenylhydrazide, synthesis, 176.

2) Phenylhydrazide of mannonic acid lactone, preparation, properties, 301.

$C_{12}H_{19}N_4Cl$. Benzal-$N^4$-butylaminoguanyl hydrochloride, synthesis, 159.

$C_{12}H_{19}O_3N_5$. 8-Dimethylaminomethylcaffeine, preparation, formation of hydrochloride, 602.

$C_{12}H_{19}O_4P$. Diester of α-hydroxyalkylphosphinic acid, preparation, properties, 709.

$C_{12}H_{19}O_5P$. 1-Furyl-1-diethylphosphobutanone-3, preparation, 529.

$C_{12}H_{30}O_2N_6$. Disemicarbazone of cis-1,6-diketodecalin, formation, 517.

$C_{13}H_{21}ON$. 1) 1,2,7-Trimethyl-4-ketodecahydroquinoline, preparation, properties, 689.

2) 2-Methyl-5-N-piperidyl-1-hexen-3-one, preparation, properties, hydrogenation, 1837.

3) Cyclohexenyl-β-dimethyl-aminopropyl-ketone, preparation, properties, picrate, hydrogenation, 1840.

$C_{13}H_{21}O_2N$. 1,2,6,6-tetramethyl-7-oxa-4-ketodecahydroquinoline, preparation, properties, hydrogenation, formation of picrate, 1457.

$C_{13}H_{21}O_4Br$. ε-Bromamylmalonic ester, preparation, properties, cyclization, saponification, reaction with sodium iodide, 1998.

$C_{13}H_{21}O_4I$. ε-Iodamylmalonic ester, preparation, properties, cyclization, 1999.

$C_{13}H_{21}O_5N$. Product of coupling ε-caprolactam with adipic acid, 1313.

$C_{13}H_{21}O_6N$. Triethanolamine triacetate, preparation, properties, 716.

$C_{13}H_{21}O_9P$. Product of reaction of ethyl glycolate, dimethylaniline and phosphorus trichloride, formation, properties, 979.

$C_{13}H_{22}O_2S$. Di-methoxypentenyl thioether, preparation, properties, 1603.

$C_{13}H_{22}O_4Ca$. Calcium galactonate, synthesis, 170.

$C_{13}H_{22}O_8N_4$. Glycylasparagine, preparation, properties, biuret complex, 1682.

$C_{13}H_{22}O_{14}Ca$. Calcium mannonate, synthesis, 176; - preparation, decomposition, 300.

$C_{13}H_{23}ON$. 1) 1,2-Dimethyl-6-ethyl-5-propyl-4-piperidone, preparation, properties, 689.

2) 2-Methyl-5-N-piperidylhexan-3-one, preparation, properties, 1837.

3) Cyclohexenyl-β-dimethylaminopropyl ketone, preparation, properties, 1840.

$C_{12}H_{23}O_2N$. 1,2,6,6-tetramethyl-7-oxa-4-hydroxydecahydroquinoline, preparation, properties, 1457.

$C_{12}H_{23}O_7P$. Mixed methyl ester of α-diethylphosphonglutaric acid, preparation, properties, 2185.

$C_{12}H_{23}O_2N$. 2-Methyl-5-isobutyl-6-methoxymethyl-4-piperidol, preparation, properties, 1715.

$C_{12}H_{25}O_4P$. Diester of α-hydroxyalkylphosphinic acid, preparation, properties, 709.

$C_{12}H_{25}O_5N$. N,N-di-(propanol-2-ethoxy-3)-acetamide, synthesis, properties, 154.

$C_{12}H_{25}O_3P$. 1) Methyl ester of β-dibutylphosphopropionic acid, preparation, properties, 539; - of β-diisobutylphosphopropionic acid, preparation, properties, 539.

2) β-Dibutylphosphoethyl acetate, preparation, properties, 539.

3) Butyl ester of ethyl phosphonacetate, preparation, properties, 972; n-butyl phosphonacetic ester, preparation, properties, 536.

4) 1-Diethyl-phosphone-2-methyl-6-methoxyhexanone-3, preparation, properties, 1419.

5) β-Diisobutylphosphoethyl acetate, preparation, properties, 539.

$C_{12}H_{28}O_6P_2$. 1,2-Di-(diethylphosphono)-butane, preparation, properties, 2110.

$C_{12}H_{28}O_6P_2$. 1,3-Di-(dimethylphosphone)-2-methyl-6-methoxyhexanol-3, preparation, properties, 1418.

$C_{12}H_{30}Si_2O$. Triethylsilane oxide, preparation, properties, 1823.

12. IV.

$C_{12}H_7HgN_3O_7$. Monomercurated derivative, of picric acid, 111.

$C_{12}H_7O_5N_3S$. N-(2,4-Dinitrophenylsulfidyl)-1,4-benzoquinoneimine, preparation, properties, 1903.

$C_{12}H_8HgN_2O_5$. Monomercurated derivative of 2,4-dinitrophenol, 110.

$C_{12}H_9O_3NS$. N-Benzenesulfonyl-1,4-benzoquinonimine, preparation, properties, reaction, 1055.

$C_{12}H_9O_4N_2Cl$. Phthalylglycylglycylchloride, preparation, properties, 2214.

$C_{12}H_9O_5N_3S$. 4-(2',4'-Dinitrophenyl-sulfidylamino)-phenol, preparation, solubility, oxidation, 1902.

$C_{12}H_{12}ON_2S_2$. 5-(1'-Ethyldihydropyridylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 216.

$C_{12}H_{12}O_2N_2S$. 3-Ethyl-5-anilinomethylene-thiazolidinedione-(2,4), preparation, acetylation, 1276.

$C_{12}H_{12}O_5N_2Cl_2$. Methyl ester of 1-nitro-N-dichloroacetylphenylalanine, preparation, 1920.

$C_{12}H_{13}OSK$. Potassium salt of 1,1-phenylcyclopentanethiocarboxylic acid, preparation, properties, 2248.

$C_{12}H_{13}O_3N_3S_2$. p-Acetaminophenyl(2'-aminothiazolyl) methane sulfone, preparation, properties, 350.

$C_{12}H_{13}O_4NS$. 2-(α-Phenyl-α-carboxymethyl)-thiazolidine-4-carboxylic acid, preparation solubility, 1081; S-β-(-α-carboxy)-ethylenecysteine, preparation, 1082.

$C_{12}H_{13}ON_2S_3$. 3-Ethyl-5-(3'-ethylthiazolinylidene-2'-ethylidene)-thiazolidinethion-(2)one-(4), synthesis, properties, 215.

$C_{12}H_{15}ON_3S_3$. 3-Ethyl-5-(3'-ethyl-5'-methylthiodiazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 216.

$C_{12}H_{15}O_2N_3S$. Thiosemicarbazone of 2-methoxy-4-hydroxystyrylmethyl ketone, formation, 2051.

$C_{12}H_{15}O_2N_3S$. 3,4-Diacetaminobenzalthiosemicarbazone, formation, 1702.

$C_{12}H_{15}O_4N_3S$. 1,5-Disubstituted derivative of hydantoin, preparation, 1741.

$C_{12}H_{16}NSI$. Ethiodide of 2,5,6-trimethylbenzothiazole preparation, 585; ethiodide of 2,6,7-trimethylbenzothiazole, preparation, 585; of 2,4,5-trimethylbenzothiazole, preparation, 941.

$C_{12}H_{16}ON_2S_3$. 3-Ethyl-5-(3'-ethylthiazolidinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4). Synthesis, properties, 216.

$C_{12}H_{17}O_2NS$. Ethyl ester of 2,5-dimethyl-tetrahydro-4-thiopyrilidenecyanacetic acid, preparation, properties, ozonation, saponification, action of methylmagnesium bromide, 901.

$C_{12}H_{17}O_2N_3S_2$. Thiosemicarbazone of p-butylsulfonylbenzaldehyde, formation, 1707

$C_{12}H_{17}O_2N_3S$. Thiosemicarbazone of 2-methoxy-4-hydroxyphenylethyl methyl ketone, formation, 2051; - of 2-hydroxy-4-methoxyphenylethyl methyl ketone, preparation, 2051.

$C_{12}H_{17}O_4NS_2$. Methylmethyl sulfate of 2,4,5-trimethylbenzothiazole, preparation, 940.

$C_{12}H_{17}O_5NS$. γ-Lactam of α-carbethoxy-β-(4-carbethoxythiazolidyl-2)-propionic acid, preparation, properties, 590.

$C_{12}H_{19}O_3NS$. 2-Methylbutanesulfanisidide, preparation, properties, 1479.

$C_{12}H_{19}O_5NAg_2$. Silver salt of product of coupling adipicacid and ε-caprolactam, 1313.

$C_{12}H_{19}O_6NS$. Ethyl ester of α-carbethoxy-β-(4-carboxythiazolidyl-2)-propionic acid, preparation, properties, 589.

$C_{12}H_{21}O_6NCa$. Ca salt of product of coupling adipic acid and ε-caprolactam, 1313.

$C_{12}H_{22}O_5NP$. Ethyl ester of diethylphosphono-

(β-cyanethyl)-acetic acid, preparation, properties, 2186.

$C_{12}H_{22}O_{11}Bi_2Ba$. Barium citrobismuthate, preparation, 1978.

$C_{12}H_{24}O_9P_2Ba$. Barium salt of ketophosphonic acid, formation 1418.

$C_{12}H_{26}O_3NP$. Ethyl ester of N-(γ-phosphonopropyl)-piperidine, preparation, properties, 1249.

## Group $C_{13}$

### 13. I

$C_{13}H_{12}$. Diphenylmethane, absorption spectrum, 884.

$C_{13}H_{16}$. 1) 1-Methyl-2-phenyl-2-cyclobutylethylene and ethylphenylmethylenecyclobutane, formation, 267; 4- -1-phenylcyclohexene, preparation, properties, 1592.

2) Hydrocarbon from reaction of ethylphenylcyclobutylcarbinol with sulfuric acid, with HCl, preparation, oxidation, 270.

$C_{13}H_{18}$. Trans-1-methyl-4-phenyl-cyclohexane, preparation, properties, formation of p-(4-methylcyclohexyl)aniline, acetanilide, benzanilide, 1592.

$C_{13}H_{22}$. Alkyldipentene, preparation, properties, 1634.

$C_{13}H_{26}$. 1) 3,5-Dimethyl-5-ethylnonen-3, preparation, properties, oxidation, bromination, catalytic hydrogenation, 642

2) 3,5,7-Trimethyl-5-ethyloctene-3, preparation, properties, oxidation, bromination, structure, hydrogenation, 642.

$C_{13}H_{28}$. 1) 3,5-Dimethyl-5-ethylnonane, preparation, properties, 644.

2) 2,4,6-Trimethyl-4-ethyloctane, preparation, properties, 644.

### 13. II

$C_{13}H_{10}O$. Benzophenone, formation, 1608.

$C_{13}H_{12}O$. Diphenylcarbinol, absorption spectrum, 884.

$C_{13}H_{14}O$. 1-(α-methoxyethyl)-naphthalene, preparation, properties, 1650.

$C_{13}H_{14}O$. Condensation product of 5-methyl-1,3-hexadien-5-ol with phenol in presence of phosphoric acid, formation, condensation with benzoyl chloride, methylation, hydrogenation, 679.

$C_{13}H_{14}O_2$. Ethyl ester of ac-β-tetrahydronaphthoic acid, preparation, 389.

$C_{13}H_{16}O_3$. 1) Pentamethylphenylglyoxylic acid, preparation, 1410.

2) ar-2-Ethoxy-3-tetrahydronaphthoic acid, preparation, properties, 1694.

$C_{13}H_{16}O_4$. Condensation product of maleic anhydride and isopropyenylcyclohexadiene, preparation, 953.

$C_{13}H_{17}Cl$. Chloride obtained from reaction of ethylphenylcyclobutylcarbinol with hydrochloric acid, preparation, splitting off HCl, 271.

$C_{13}H_{18}O$. 1) Ethylphenylcyclobutylcarbinol, preparation, properties, oxidation, reaction with hydrochloric and sulfuric acids, 269.

2) Propyl and isopropylmesityl ketones, preparation, 1412.

3) .1-Methoxy-3-benzylpent-4-ene, preparation, properties, oxidation, 1596; -5-benzylpent-3-en, preparation, properties, 1596.

$C_{13}H_{18}O_2$. 1-Ethynyl-6-methoxy-1-octalol, preparation, hydrolysis, 518.

$C_{13}H_{18}O_3$. Methyl ester of 2,3,5,6-tetramethylmandelic acid, preparation, 1409.

$C_{13}H_{18}O_4$. Diethyl acetal of formylphenyl acetic acid, preparation, properties, action of heat, HCl, 1081.

$C_{13}H_{20}O$. 1) p-Isoheptylphenol, preparation, benzoylation, 680.

2) Dimethylbutyl-p-hydroxyphenylmethane, preparation, properties, methylation, benzoylation, 680.

3) Cleavage product of 6-dipentenylacetoacetic ester, formation, properties, semicarbazone, 1000.

4) Ethyl-2,3,5,6-tetramethylbenzyl ether, preparation, properties, 1647.

5) Methyl pentamethylbenzyl ether, preparation, properties, 1647.

6) 1,2,4,5-Tetramethyl-6(α-methoxyethyl)-benzene, preparation, properties, 1651.

$C_{13}H_{20}O_3$. 1) Condensation product of 2-methyl-epoxy-1,2-hexen-5-yn-3 with methyl isobutyl ketone (dioxolane) formation, 1627.

2) Methyl-6-dipentenylacetic acid, preparation, properties, 1000; - dipentenylacetic acid, preparation, formation of Ag salt, 1002.

$C_{13}H_{20}O_4$. Myrtenyl acid phthalate, preparation, 867.

$C_{13}H_{22}O$. Product of reaction of myrtenyl magnesium halide and acetone, formation, properties, 1631.

$C_{13}H_{22}O_2$. Product of reaction of 2-methyl-epoxy-1,2-hexen-5-yn and secondary hexyl alcohol, 2016.

$C_{13}H_{22}O_4$. 1) Cycloheptane-1,1-dicarboxylic ester, preparation, properties, saponification, 872.

2) α-Methyl-δ-pentenylmalonic ester, preparation, properties, saponification, action of heat, addition of HBr, cyclization, 1997.

3) Cyclization product of δ-brom-α-methylamylmalonic ester, formation, properties, saponification, 1998.

4) 1-Isopropylcyclobutane-3,3-dicarboxylic ester, preparation, properties, 2004.

$C_{13}H_{22}O_5$. Ethyl ester of α-aceto-β-keto-γ-ethoxymethylcaproic acid, preparation, properties, formation of ethyl ester, 1933.

$C_{13}H_{24}O_4$. Dimethyl ester of dimethylisobutylglutaric acid, preparation, properties, saponification, 2024.

$C_{13}H_{24}O_5$. Ethyl ester of β-acetoxy-γ-ethoxy-

methylcaproic acid, preparation, fusion with potassium acetate, 1934.

$C_{13}H_{24}O_6$. Diethyl ester of α-carbethoxy-γ,γ-diethoxybutyric acid, preparation, properties, 588.

$C_{13}H_{25}Br$. Monobromides of unsaturated hydrocarbons, preparation, properties, 643.

$C_{13}H_{26}O_2$. Product of reaction of isopropylmagnesium bromide with the chloroanhydride of isovaleric acid, formation, saponification, 1992.

$C_{13}H_{28}O$. Tri-n-butylcarbinol, 1386.

13. III

$C_{13}H_9ON$. 1-Hydroxyphenanthridine, formation, 2057.

$C_{13}H_9O_3N$. Phenyl ester of p-nitrosalicylic acid, preparation, solubility, 2070.

$C_{13}H_{10}O_2N_2$. 1-Methoxyphenazine mono-N-oxide, preparation, properties, 1917.

$C_{13}H_{11}NO_3$. Haplophine, preparation, solubility, 1107.

$C_{13}H_{11}O_3N$. 1) 2-Nitro-3-methoxybiphenyl, preparation, hydrogenation, 2056.

2) p-Aminosalicylic acid phenyl ester, preparation, solubility, 2071.

$C_{13}H_{11}O_4N_3$. N-methyl-N-phenyl-2,4-dinitroaniline, preparation, 325.

$C_{13}H_{12}N_4S$. Diphenylthiocarbazone, (dithizone), absorption spectra and dissociation constants, 475.

$C_{13}H_{12}O_2N_2$. 1-Ethoxyphenazine mono-N-oxide, preparation, properties, 1917.

$C_{13}H_{12}O_3N_2$. Azlactone of α-p-diacetaminocinnamic acid, preparation, boiling with water, 1920.

$C_{13}H_{13}ON$. 2-Amino-3-methoxybiphenyl, preparation, properties, formation of picrate, reaction with formic acid, 2056.

$C_{13}H_{13}O_2N$. 2-Phenyl-4-isobutylidene-5-oxazolone, preparation, properties, formation of anilide, action of NaOH, Raney nickel, isomerization action of MeOH, piperidine, 1924

$C_{13}H_{13}O_5N_3$. p-Nitrophenylhydrazone of diketocarboxylic acid, preparation, 737.

$C_{13}H_{14}O_3N_2$. 5-Nitro-8-butoxyquinoline, preparation, properties, formation of acetyl, and acetamino-compounds, 1267.

$C_{13}H_{14}O_4N_2$. α-p-Diacetaminocinnamic acid, preparation, hydrogenation, 1920.

$C_{13}H_{14}O_6Hg$. Orthotolylmercury tricarballylate, 116.

$C_{13}H_{14}O_6N_2$. Ethyl ester of 5,7-dinitro-ac-tetrahydro-1-naphthoic acid, preparation, solubility, 1091.

$C_{13}H_{14}O_7Hg$. Orthotolylmercury citrate, 116.

$C_{13}H_{15}ON$. 8-Butoxyquinoline, preparation, properties, picrate, 1266.

$C_{13}H_{15}O_2N$. 8-Butoxyquinoline N-oxide, preparation, properties, 1271.

$C_{13}H_{15}O_3N$. 1) 5-Acetamino-ac-tetrahydro-1-naphthoic acid, preparation, solubility, 1088; 7-acetamino-ac-tetrahydro-1-naphthoic acid, preparation, 1089; 8-acetamino-ac-tetrahydro-2-naphthoic acid, preparation, properties, 1491.

2) N-Benzoylamino-β-methyl-β-ethylacrylic acid, preparation, isomers, derivatives, 1924;

$C_{13}H_{15}O_4N$. Ethyl ester of 7-nitro-ac-tetrahydro-1-naphthoic acid, preparation, solubility, 1087; - of 5-nitro-ac-tetrahydro-1-naphthoic acid, preparation, properties, 1087; - of 6-nitro-ac-tetrahydro-2-naphthoic acid, preparation, properties, 1490.

$C_{13}H_{16}OS$. Ethyl ester of ac-α-tetrahydrothionaphthoic acid, preparation, properties, 388; - of ac-β-tetrahydrothionaphthoic acid, preparation, 390.

$C_{13}H_{16}O_4Hg$. Orthoditolylmercury adipate, 115.

$C_{13}H_{16}O_4N_2$. p-Acetamino-N-acetylphenylalanine, preparation, properties, hydrolysis, 1921.

$C_{13}H_{16}O_4N_4$. Ethyl ester of β-(caffeine-8)-acrylic acid, preparation, properties, hydrogenation, 595.

$C_{13}H_{18}O_6S$. p-Ethylsulfonylbenzaldehyde diacetate, preparation, formation of aldehyde, 1706.

$C_{13}H_{17}O_2N$. 1) Ethyl ester of 7-amino-ac-tetrahydro-1-naphthoic acid, preparation, properties, 1089.

2) Diethoxymethyl-(phenyl)-acetonitrile, preparation, properties, 1660.

$C_{13}H_{17}O_5N$. N-Carbethoxy-p-aminosalicylic acid isopropyl ester, preparation, solubility, 2072.

$C_{13}H_{18}O_3S$. p-Hexylsulfonylbenzaldehyde, preparation, formation of thiosemicarbazone, 1707.

$C_{13}H_{18}O_4N_4$. 1) Ethyl ester of β-(caffeine-8)-propionic acid, preparation, properties, 596.

2) Acetate of 8-(3-hydroxypropyl)-caffeine, preparation, 2282.

$C_{13}H_{19}ON$. 1,2-Dimethyl-4-phenyl-4-piperidol, preparation, formation of acetate, propionate, picrate, tartrate, benzoate, 1711.

$C_{13}H_{19}O_2Ag$. Silver salt of methyl-6-dipentenylacetic acid, 1002.

$C_{13}H_{19}O_2N$. 1-Phenylamino-5-methoxyhexan-3-one, preparation, properties, 1713.

$C_{13}H_{19}O_3N_3$. Semicarbazone of 1-ethynyl-6-ketodecalol, preparation, 518.

$C_{13}H_{19}O_3N$. Diethoxymethyl-(phenyl)-acetamide, preparation, properties, formation of acid, action of HCl, 1660.

$C_{13}H_{19}O_3N_5$. Dimethylamide of β-(caffeine-8)-propionic acid, preparation, properties, 597.

$C_{13}H_{19}O_4N$. 3,4-Dimethylphenyl-d-arabinoside, preparation, rearrangement, 1938; -isoarabinoside, preparation, properties, reduction, 1938.

$C_{13}H_{19}O_4P$. Addition product of diethylphosphorous acid and cinnamic aldehyde, preparation, 535.

$C_{13}H_{19}O_5P$. Ethyl ester of β-phenyl-β-dimethylphosphonopropionic acid, preparation, properties, 1190.

$C_{13}H_{19}O_6N$. Methyl ester of β-(α'-cyano-α'-carbethoxy)-propylglutaric acid, preparation, properties, 1515.

$C_{13}H_{20}O_2S$. Hexyl-p-tolylsulfone, preparation, oxidation, 1706.

$C_{13}H_{20}O_3N_4$. [8-(3-ethoxypropyl)-caffeine], preparation, 2283.

$C_{13}H_{21}O_2N_5$. 8-Diethylaminomethylcaffeine, preparation, formation of hydrochloride, 601.

$C_{13}H_{21}O_3N$. Turneforcine, isolation, purification, formation of hydrochloride, chloroplatinate, saponification, 1509.

$C_{13}H_{21}O_4N$. 1) Ethyl ester of β-(α'-cyano)-propylglutaric acid, preparation, properties, reaction with homoveratrylamine, 1516.

2) 3,4-Dimethylphenyl-d-ribamine, preparation, 1937.

$C_{13}H_{21}O_4P$. Diester of α-hydroxyalkylphosphinic acid, preparation, properties, 709.

$C_{13}H_{21}O_5P$. Product of reaction of benzyl chloride and sodium di-β-methoxyethylphosphite, preparation, properties, 311.

$C_{13}H_{23}ON$. 3-Methyl-6-N-piperidyl-2-hepten-4-one, preparation, properties, hydrogenation, 1839.

$C_{13}H_{23}O_4Br$. 1) Ester of δ-bromo-α-methylamylmalonic acid, preparation, properties, 1996.

2) Haloidalkylmalonic ester, preparation, properties, 2004.

$C_{13}H_{23}O_4I$. ξ-Iodohexyl malonic ester, preparation, properties, 872.

$C_{13}H_{25}ON$. 3-Methyl-6-N-piperidylheptan-4-one, preparation, properties, 1839.

$C_{13}H_{25}O_2N$. 1,2-Dimethyl-5-isobutyl-6-methoxymethyl-4-piperidone, preparation, properties, formation of picrate, hydrogenation, 1714.

$C_{13}H_{25}O_7P$. 1) Product of reaction of n-propyl ester of glycollic acid, dimethylaniline and dipropoxychlorophosphine, formation, properties, 979.

2) Product of rearrangement of dipropyl-(carbopropoxymethyl) phosphite, formation, properties, 979.

3) Methylethyl ester of α-methyl-α'-diethylphosphonglutaric acid, preparation, properties, 2185.

$C_{13}H_{27}O_4P$. 1) 1-butoxy-5-diethylphosphopentene-3, synthesis, properties, 129.

2) 1-Methyl-1-dibutylphosphobutanone, preparation, 528; -1-diisobutylphosphobutanone, preparation, 528.

$C_{13}H_{27}O_5N$. N,N-di-(propanol-2-isopropoxy-3)-formamide, preparation, analysis, formation of acetate, 987.

## 13. IV

$C_{13}H_{17}O_3NS$. N-p-toluenesulfonyl-1,4-benzoquinonimine, preparation, properties, reaction with phenol, 1055.

$C_{13}H_{12}O_4N_2Cl_4$. p-Dichloroacetamino-N-dichloroacetylphenylalanine, preparation, solubility, 1921.

$C_{13}H_{13}ONBr_2$. 5,7-Dibromo-8-butoxyquinoline, preparation, properties, 1267.

$C_{13}H_{14}N_2O_2S$. p-Aminophenyl anilyl methane sulfone, preparation, properties, 349.

$C_{13}H_{15}O_3NS$. Ethyl ester of 5-nitro-ac-tetrahydro-thionaphthoic acid, preparation, properties, 1092.

$C_{13}H_{15}O_3N_3S_2$. p-Acetaminophenyl-(2'-amino-4'-methylthiazolyl)-methanesulfone, preparation, 349.

$C_{13}H_{15}O_4NS$. 2-(α-phenyl-α-carbomethoxymethyl)-thiazolidine-4-carboxylic acid, preparation, action of heat, 1080; S-β-(α-phenyl-α-carbomethoxy)-ethylenecysteine, preparation, properties, reaction with pyridine and triethylamine, 1083.

$C_{13}H_{15}O_4N_3S$. 1) Amide of desdimethylphenylpenicilloinic acid, preparation, 2256.

2) 4-Aminomethylen-2-phenyl-5-oxazolone, preparation, properties, 2256.

3) Product from action of ammonia on pyridine salt of S,N-di-(2-phenyl-5-oxazolonylmethylen-4-)-cysteine, 2256.

$C_{13}H_{15}O_5N_3S$. Tolylsulfoglycyl-2,5-diketo-piperazine, preparation, properties, structure, 2211.

$C_{13}H_{16}O_4N_4S$. 4-Succinylamino-2-methoxy-benzalthiosemicarbazone, formation, 1702.

$C_{13}H_{17}O_2N_3S$. Thiosemicarbazone of 2,4-dimethoxystyryl methyl ketone, formation, 2052.

$C_{13}H_{20}O_3N_2S$. p-Acetaminophenyl (diethylamino) methane sulfone, preparation, properties, 350.

$C_{13}H_{21}N_4O_2Cl$. 3-Hydroxy-4-methoxybenzal-$N^4$-butylaminoguanyl hydrochloride, synthesis, 159.

## 13. V

$C_{13}H_{11}O_3N_2ClS$. 4-(4'-Chloro-2'-nitrophenyl sulfidylamino)-anisole, preparation, solubility, oxidation, 1902.

$C_{13}H_{16}O_4NSCl$. S-β-(α-phenyl-α-carbomethoxy)-ethylenecysteine hydrochloride, preparation, properties, formation of base, 1083.

$C_{13}H_{29}O_3NPBr$. Ethobromide of ethyl-ester of N-(β-phosphonethyl)-piperidine, formation, 1248.

## Group $C_{14}$

## 14. I

$C_{14}H_{10}$. Anthracene, condensation with acrolein, 1697.

$C_{14}H_{14}$. 1) Dibenzyl, preparation, 834.

2) Di-p-tolyl, preparation, properties, 1168; preparation, properties, 1649; preparation, 1651.

$C_{14}H_{18}$. 1) Product of reaction of isopropylcyclobutylphenylcarbinol with sulfuric acid, formation, properties, ozonization, 1858.

2) Product of reaction of isopropylcyclobutylphenyl carbinol with HCl, formation, properties, oxidation, 1858.

3) Product of cleavage of HCl from $C_{14}H_{19}Cl$, formation, properties, 1859.

$C_{14}H_{28}$. 2,6-Dimethyl-4-tert-butylstyrene, preparation, properties, polymerization, 1222.

$C_{14}H_{22}$. 3,3,8,8-tetramethyldecadiyne-4,6, preparation, properties, 2205.

$C_{14}H_{24}$. 6-Alkyldipentene, preparation, properties, 1633.

14. II

$C_{14}H_8O$. 1,2-Dihydroxyanthraquinone, (alizarin), . bromination, 1638.

$C_{14}H_8O_3$. Hydroxyanthraquinone, bromination with dioxan dibromide, 1638.

$C_{14}H_8O_4$. Dihydroxyanthraquinone, bromination with dioxane dibromide, 1638.

$C_{14}H_{10}N_4$. Phenyl-diimidazolo-1,2,4,5-benzene, preparation, properties, 1068.

$C_{14}H_{10}O_2$. Benzil, polarographic investigation of, 2161.

$C_{14}H_{11}Cl_3$. 1,1,1-Trichloro-2,2-diphenylethane, preparation, nitration, 1007.

$C_{14}H_{12}O$. 2,6-Dimethyl-4-tert-butylstyrene, preparation, properties, polymerization, 1222.

$C_{14}H_{12}O_2$. Benzoin, polarographic investigation of, 2161.

$C_{14}H_{14}Hg$. 1) p-Ditolylmercury, reaction with amides of fatty acids, 701.

2) Dibenzylmercury, reaction with thiosalicylic acid, 706.

$C_{14}H_{14}O$. Propyl- and isopropyl-α-naphthyl ketone, preparation, 1412.

$C_{14}H_{14}O_3$. 2-Hydroxy-3-naphthylbutyric acid, preparation, 1693.

$C_{14}H_{16}O$. Vinylacetylenic phenol, preparation, analysis, condensation with chloroacetic acid, methylation, hydrogenation, 521.

$C_{14}H_{16}O_4$. ar-2-Hydroxytetrahydronaphthoyl-3-propionic acid, preparation, formation of ethyl ester, 1692.

$C_{14}H_{18}O$. Methyl ether of dienephenol, preparation, properties, 679.

$C_{14}H_{18}O_3$. Furanic phenol, preparation, properties, methylation, oxidation of methyl ester, 521.

$C_{14}H_{18}O_4$. α,α-Isopropylphenylglutaric acid, preparation, formation of Ag salt, 1857; preparation, 1858.

$C_{14}H_{18}O_{10}$. Tetraacetate of mannonolactone, synthesis, 176.

$C_{14}H_{19}Cl$. Chloride of reaction product of isopropylcyclobutylphenyl carbinol and HCl, formation, properties, hydrolysis, cleavage, 1858.

$C_{14}H_{20}N_2$. 1,2,5-Trimethyl-4-phenyliminopiperidine, preparation, properties, hydrogenation, 687.

$C_{14}H_{20}O$. 1) Cis-$\Delta^{9d}$-dodecahydrophenanthren-4-one, preparation, properties, hydrogenation, action of methyl-magnesium iodide, dehydrogenation, isomerization, 276.

2) Isobutylmesityl ketone, preparation, 1412.

3) Isopropylphenylcyclobutyl carbinol, preparation, properties, oxidation, reaction with sulfuric acid, HCl, 1857.

4) 1,1-Isopropylphenylcyclopentanol, preparation, 1858.

$C_{14}H_{20}O_2$. Condensation product of 3-methylepoxy-2,3-hepten-6-yn-4 with mesityl oxide, (dioxolane), formation, hydrolysis, 1628.

$C_{14}H_{20}O_3$. Methyl pentamethyl mandelate, preparation, properties, 1409.

$C_{14}H_{20}O_{10}$. ) 1,3,4,6-tetraacetylgalactose, synthesis, properties, 169.

2) 2,3,4,6-tetraacetylmannose, preparation, properties, 304; 1,3,4,6- — preparation, 305.

$C_{14}H_{22}N_2$. 1,2,5-Trimethyl-4-phenylamino-piperidine, preparation, properties, 687.

$C_{14}H_{22}O$. 1) Cis-perhydrophenanthren-4-one, preparation, 277.

2) Hydrogenation product of vinylacetylenic phenol, preparation, properties, 523.

3) Methyl ether of dimethylbutyl-p-hydroxyphenylmethane, preparation, properties, 680

4) Isobutanoyl-6-dipentene, preparation, properties, semicarbazone, 1001.

5) Dibutylphenol, formation, properties, 1016; preparation, properties, 1017.

6) 1,2,4,5-Tetramethyl-6-(α-ethoxyethyl)-benzene, preparation, properties, 1652.

$C_{14}H_{22}O_2$. 1) Condensation product of 3-methylepoxy-2,3-hepten-6-yn-4 with methyl isobutyl ketone, formation, hydrolysis, 1628.

2) 2,7-Dimethyl-2,7-diethoxyoctadiyne-3,5, preparation, properties, oxidation, structure, 2204.

$C_{14}H_{24}O$. 4-Methyl-2-heptylidenecyclohexanone, preparation, properties, hydrogenation, 1210.

$C_{14}H_{24}O_2$. Dibutyl phthalate, effect of temperature on polarographic reduction of, 1799

$C_{14}H_{24}O_4$. Ethyl ester of α-carbethoxy-β-oxo-γ-ethoxymethylcaproic acid, preparation, 1933.

$C_{14}H_{26}O$. 4-Methyl-2-heptylcyclohexanone, preparation, properties, formation of oxime, semicarbazone, p-nitrophenylhydrazone, 1211.

$C_{14}H_{28}O_2$. 1) Myristic acid, formation, 2039.

2) Hydrogenation product from 2,7-dimethyl-2,7-diethoxyoctadiyne-3,5, preparation, properties, structure, oxidation, 2199.

3) 2,7-Dimethyl-2,7-diethoxyoctene-4, preparation, properties, 2200.

14. III

$C_{14}H_7O_2Br$. 4-Bromo-1-hydroxyanthraquinone, preparation, 1638.

$C_{14}H_9O_2N_5$. Methyl-β-pyridiyl-1,2,4,5-diimidazolo-3,6-benzoquinone, preparation, properties, 1073.

$C_{14}H_{11}ON$. 1-Methoxyphenanthridine, preparation, 2057.

$C_{14}H_{12}O_2Hg$. Orthotolylmercury benzoate, 116.

$C_{14}H_{12}O_3N_2$. 2,6-Dimethoxyphenazine mono-N-oxide, preparation, 1917; 1,7-dimethoxyphenazine-mono-N-oxide, preparation, 1917.

$C_{14}H_{12}O_5Hg$. Orthotolylmercury gallate, 116.

$C_{14}H_{13}NBr_2$. N-Ethyldiphenylamine dibromide, preparation, 2097.

$C_{14}H_{13}NO_2$. 2-Formylamino-3-methoxybiphenyl, preparation, properties, reaction with fused zinc chloride, 2056.

$C_{14}H_{13}NO_4$. Skimmianine, preparation, formation of picrate, 1106.

$C_{14}H_{13}N_2Cl_3$. 1,1,1-Trichloro-bis-(p-aminophenyl)-ethane, preparation, 1010.

$C_{14}H_{15}O_3N_5$. Product of reaction of 2-hydroxy-4-methyl-5-carbethoxydihydropyramidine and p-nitrodiazobenzene, formation, 1727.

$C_{14}H_{15}O_4N$. p-Nitrobenzyl ester of diketocarboxylic acid, preparation, formation of p-nitrophenylhydrazone, 737.

$C_{14}H_{14}O_2Hg$. p-Dianisylmercury, photoreactions of, 541.

$C_{14}H_{14}O_2S_2$. Ditolylsulfone disulfide, formation, 1903.

$C_{14}H_{14}O_5N_2$. Condensation product of N,N'-diphthalylglycyldiketopiperazine and glycocoll, formation, properties, structure, 2220.

$C_{14}H_{14}O_3N_2$. 2-Hydroxy-4-methyl-5-carbethoxy-6-phenyldihydropyrimidine, preparation, properties, reaction with diazo compounds, derivatives, 1726.

$C_{14}H_{14}O_4Ag$. Ag salt of $\alpha,\alpha$-isopropylphenylglutaric acid, formation, 1858.

$C_{14}H_{14}O_4Ag_2$. 1) Ag salt of $\alpha,\alpha$-isopropylphenylglutaric acid, preparation, 1857.

2) Silver salt of $\alpha,\alpha$-isopropylphenylglutaric acid, formation, 1859.

$C_{14}H_{16}O_9Cl_4$. 1-Chloro-2-(trichloroacetyl-3,4,6-triacetylgalactose, synthesis, properties, 168.

$C_{14}H_{17}N_3S_2$. 2-Methyl-6-(N-allyl-S-ethyl-isothiocarbamido-N')-benzothiazole, preparation, properties, formation of ethyl perchlorate, p-toluenesulfonate, 377.

$C_{14}H_{13}ON$. 8-Isoamyloxyquinoline. preparation, properties, picrate, 1266.

$C_{14}H_{17}O_2Cl$. $\gamma$-Chloropropyl ester of ac-$\alpha$-tetrahydronaphthoic acid, preparation, formation of $\gamma$-diethylaminopropyl ester (hydrochloride), 387; of ac-$\beta$-tetrahydronaphthoic acid, preparation, properties, 390.

$C_{14}H_{17}O_2N$. 8-Isoamyloxyquinoline N-oxide, preparation, properties, 1271.

$C_{14}H_{17}O_2N$. Methyl ester of N-benzoylamino-$\beta$-methyl-$\beta$-ethylacrylic acid, preparation, 1925.

$C_{14}H_{18}OS$ Ethyl ester of 1,1-phenylcyclopentane thiocarboxylic acid, preparation, 2249.

$C_{14}H_{18}O_2N_2$. Diacetyl-(2,6-tetrahydronaphthylenediamine), preparation, 1491.

$C_{14}H_{18}O_2N_4$. Picrate of 1,2,5-trimethyl-4-piperidone, formation, 686.

$C_{14}H_{18}O_9Cl_4$. 1-Chloro-2-(trichloroacetyl)-3,4,6-triacetylmannose, preparation, properties, 304.

$C_{14}H_{19}O_2N$. Ethyl ester of N-($\beta$-phenyl-piperidyl)-carboxylic acid, preparation, 720.

$C_{14}H_{19}O_3N$. 1) Diethyl acetal of formylhippuric acid, reaction with thionyl chloride, 935.

2) N-Carbethoxy-p-aminosalicylic acid isobutyl ester, preparation, solubility, 2072.

3) Isopropyl ester of N-carbisopropoxy-p-aminosalicylic acid, preparation, solubility, 2072.

$C_{14}H_{19}O_4N_3$. Diethoxymethylhippuric amide, preparation, formation of phenylhydrazone, action of dl-cysteine hydrochloride, 2256.

$C_{14}H_{21}O_4P$. 1-Phenyl-1-diethylphosphobutanone-3, preparation, 529.

$C_{14}H_{21}O_5P$. Ethyl ester of 4-phosphonomethyl-2-phenyldioxolan-1,3; preparation, properties, hydrolysis, 1245.

$C_{14}H_{22}O$. Cleavage product of 6-dipentenylmethylacetoacetic ester, formation, properties, 1001.

$C_{14}H_{23}ON$. Indicamin, isolation, formation of picrate, 2298.

$C_{14}H_{25}ON_3$. Semicarbazone of 6-acetonyldipentene, formation, 1000.

$C_{14}H_{23}O_2N$. 1,2,6,6-Tetramethyl-7-oxa-4-ethinyl-4-hydroxydecahydroquinoline, preparation, properties, formation of hydrochloride, hydrogenation, 1457.

$C_{14}H_{25}O_7P$. $\alpha$-Diethylphosphono-$\alpha,\beta\gamma$-propanetricarboxylic acid dimethyl ester, preparation, properties, 2185.

$C_{14}H_{27}O_2N$. 1,2,6,6-tetramethyl-7-oxa-4-ethyl-4-hydroxydecahydroquinoline, preparation, 1458.

$C_{14}H_{29}O_4P$. Diester of alpha hydroxyalkylphosphinic acid, preparation, properties, 709.

$C_{14}H_{29}O_5N$. N,N-di-(propanol-2-isopropoxy-3)-acetamide, analysis, 988.

$C_{14}H_{29}O_5P$. Ethyl ester of $\beta$-dibutylphosphonobutyric acid, preparation, properties, 1191.

## 14. IV

$C_{14}H_8O_8N_2S_2$. 2,2-Dithio-4-nitrobenzoic acid, preparation, properties, esterification, action of ammonia, KOH, 1897.

$C_{14}H_9O_4N_3Cl_3$. 1,1,1-Trichloro-bis-(p-nitrophenyl)-ethane, preparation, reduction, 1009.

$C_{14}H_8O_7N_2S_2$. 2,2'-Dithio-4-nitrobenzoic acid monoamide, preparation, solubility, 1897.

$C_{14}H_{10}O_4HgS_2$. Mercuribisthiosalicylic acid, preparation, cleavage with HCl, 706.

$C_{14}H_{11}O_3NS$. 2-Phenylindolesulfonic-3 acid, polarographic investigation, 928.

$C_{14}H_{12}ON_2S_3$. 5-(3'-Ethylbenzothiazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 215.

$C_{14}H_{12}O_2N_2S_2$. 5-(3'-Ethylbenzoxazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 216.

$C_{14}H_{12}O_4N_2S$. N-(2'-phenyl-5(4')-oxazolonemethylene-4')-thiazolidine-4-carboxylic acid, preparation, properties, derivatives, 1910.

$C_{14}H_{13}ON_3S_3$. 3-Amino-5-(3'-ethylbenzothiazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4) [2], preparation, 771.

$C_{14}H_{13}O_2N_3S_2$. 3-Amino-5-(3'-ethylbenzoxazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4) [2], preparation, 771

$C_{14}H_{14}O_3N_2S_2$. 3-Ethyl-5-(acetanilinomethylene)-rhodanine, synthesis, 212.

$C_{14}H_{14}O_3N_2S$. 1) p-Aminophenyl-p'-aminophenacyl sulfone, preparation, formation of Schiff base with salicylaldehyde, 341.

2) 3-Ethyl-5-acetanilinomethylene thiazolidinedione-(2,4), preparation, 1276.

$C_{14}H_{14}O_4N_2Cl_4$. Methyl ester of p-dichloroacetamino-N-dichloroacetylphenylalanine, preparation, 1921.

$C_{14}H_{15}O_3NS$. 1) Product of reaction of 2-phenyl-4-isopropylidene-5-oxazolone with thioacetic acid, 322.

2) Product of reaction of thioacetic acid with 2-phenyl-4-isopropyliden-5-oxazolone, 323.

$C_{14}H_{15}O_3N_2S$. p-Acetaminophenyl (2'-aminopyridyl) methane sulfone, preparation, properties, 351.

$C_{15}H_{15}O_5NS$. 2-(α-phenyl-α-carboxymethyl)-N-acetylthiazolidine-4-carboxylic acid, preparation, solubility, 1084.

$C_{14}H_{14}ON_2S_2$. 3-Ethyl-5-(1'-ethyldihydropyridylidene-2'-ethylidene)-thiazolidine-(2)-one-(4), synthesis, properties, 216.

$C_{14}H_{14}O_3N_4S_2$. 3-Diacetylamino-5-(3'-ethyl-5'-methylthiodiazolinylidene-(1',3',4')-2'-ethylidene)-thiazolidinethion-(2)-one-(4), preparation, 772.

$C_{14}H_{16}O_4N_2S_2$. Di-(methanesulfo)benzidide, preparation, 1471.

$C_{14}H_{15}O_4N_3S$. 4-Succinylamino-3-methoxy-benzalthiosemicarbazone, formation, 1702.

$C_{14}H_{17}O_4NS$. 2-(α-Phenyl-α-carbethoxymethyl)-thiazolidine-4-carboxylic acid, preparation, properties, formation of hydrochloride, keto form of ethyl formylphenylacetate, cysteine, methyl ester, acetyl derivative, attempt to close β-lactam ring, heating the sodium salt, 1079; S-β-(α-phenyl-α-carbethoxy)-ethylene-dl-cysteine, preparation, action of sodium bicarbonate, formation of thiazolidine compound, 1082.

$C_{14}H_{18}N_2S_2I$. Ethiodide of 2-methyl-6-(N-allylthiocarbamide-N')-benzothiazole ethyl-p-tolusulfonate, preparation, 377.

$C_{14}H_{21}O_4NS_2$. Ethylethyl sulfate of 2,4,5-trimethylbenzothiazole, preparation, 941.

$C_{14}H_{22}N_5OI$. p-Acetaminobenzal-$N^4$-butylaminoguanyl hydroiodide, synthesis, 159.

$C_{14}H_{22}O_6S_2Cl_2$. Dimethyl perchlorate of α,ω-di[4-methylthiazolyl-(2)]-butane, preparation, reaction with ethyl p-toluenesulfonate, 933.

$C_{14}H_{28}O_6N_2P$. Diethylphosphon-(β-cyanethyl)-acetic acid ethyl ester, preparation, properties, 2184.

$C_{14}H_{24}O_2N_2S$. p-Aminophenyl-δ-diethylaminobutylsulfone, preparation, hydrochloride, 342.

$C_{14}H_{26}O_2N_2SCl_2$. Dihydrochloride of p-aminophenyl-δ-diethylaminobutyl sulfone, preparation, properties, 342.

$C_{14}H_{28}O_2S_2Hg$. Mercuric mercaptide, formation, 1620.

$C_{14}H_{27}O_2N_3S_2$. Thiosemicarbazone of p-hexylsulfonylbenzaldehyde, formation, 1707.

## 14. V

$C_{14}H_6O_4N_2S_2F_6$. 4,4'-Bis(trifluoromethyl)-2,2'-dinitrodiphenyldisulfide, reduction, preparation, 2269.

$C_{14}H_{15}ON_2S_2Se$. 5-(3'-Ethylbenzoselenazolinylidene-2'-ethylidene)-thiazolidinethion(2)-one-(4), synthesis, properties, 215.

$C_{14}H_{16}ON_2PCl$. Anilide of α-chloroethylphosphinic acid, formation, 1579.

$C_{14}H_{15}ONa_2PO_4$. Phosphorus-containing compound of condensation product of 2,5-dimethyl-1,5-hexadien-3-yne with phenol, 522.

$C_{14}H_{16}O_4NSCl$. S-β-(α-phenyl-α-carbethoxy) ethylene-dl-cysteine hydrochloride, preparation, solubility, 1082.

$C_{14}H_{15}O_4N_2S_2Cl$. Ethyl-perchlorate of 2-methyl-6-(N-allylthiocarbamide-N')-benzothiazole ethyl-p-tolusulfonate, preparation, 377.

$C_{14}H_{31}O_3NPI$. Ethiodide of the ethyl ester of N-(γ-phosphonopropyl)-piperidine, formation, 1249.

## Group $C_{15}$

## 15. I

$C_{15}H_{12}$. 4-Methylphenanthrene, formation, picrate, 279.

$C_{15}H_{20}$. Product of reaction of 2,2,3-trimethyl-3-chlorohexyne-4, formation, properties, ozonization, oxidation, 1847.

$C_{15}H_{22}$. 1) Product of dehydration of 4-methyl-$\Delta^{8a}$-dodecahydrophenanthren-4-ol, preparation, properties, dehydrogenation, 277.

2) 3,5-Dimethyl-5-phenylheptene-3, preparation, properties, oxidation, bromination, catalytic hydrogenation, 642.

$C_{15}H_{24}$. Tricyclopentane, preparation, properties, 1585.

$C_{15}H_{28}$. 3,5-Dimethyl-5-cyclohexylheptene-3, preparation, properties, oxidation, bromination, catalytic hydrogenation, 642.

$C_{15}H_{30}$. 3,5-Dimethyl-5-cyclohexylheptane, preparation, properties, Raman spectrum, 644.

## 15. II

$C_{15}H_{12}N_4$. Methylphenyldiimidazolo-1,2,4,5-benzene, preparation, 1066.

$C_{15}H_{12}O$. Benzalacetophenone, formation, 1608.

$C_{15}H_{12}O_3$. 1) m-Benzoylhydroxyacetophenone, preparation, properties, 562.

2) m-Hydroxyphenyl-β-(methylamino)-ethanol, preparation, 562.

$C_{15}H_{13}N$. Cinnamylideneaniline, preparation, properties, bromination, formation of salts, 555.

$C_{15}H_{14}O$. 1) 1,1-Diphenylpropanone-2, synthesis, 181; reaction with ammoniacal silver oxide solution, 1382.

2) 1,1-Diphenylpropene-1 oxide, synthesis, properties, 181.

3) Dibenzyl ketone, reaction with ammoniacal silver oxide solution, 1382.

$C_{15}H_{14}O_3$. β,β-Diphenyl-β-hydroxypropionic acid, condensation with aryl amides, 1235.

$C_{15}H_{16}O$. Isobutyl-α-naphthyl ketone, preparation, 1412.

$C_{15}H_{16}O_2$. 1,1-Diphenylpropanediol-1,2, synthesis, properties, 181.

$C_{15}H_{16}O$. Methylation product of vinylacetylenic phenol (methyl ester of substituted phenol), preparation, 523.

$C_{15}H_{18}O_3$. γ-Furyl-α-n-butylallyl acetate, preparation, properties, 2291.

$C_{15}H_{20}O_2$. Methyl ester of furanic phenol, preparation, properties, oxidation, 523.

$C_{15}H_{21}O_2$. Acetate of 1,2-dimethyl-4-phenyl-4-piperidol, preparation, properties, 1712.

$C_{15}H_{22}O_4$. Diethylacetal of ethylformylphenyl acetate, preparation, properties, 1080.

$C_{15}H_{24}O$. 4-Methyl-$\Delta^{9,5}$-dodecahydrophenanthren-4-ol, preparation, properties, dehydration, 277.

$C_{15}H_{26}O$. Ether formed from chloroterpene, preparation, properties, 869.

$C_{15}H_{30}O$. Tetramer of isobutylene, 121.

$C_{15}H_{30}S$. Cyclopentyl decyl sulfide, constants, 162.

15. III

$C_{15}H_{10}N_2S_2$. Bis-[benzthiazolyl-(2)]-methane, preparation, derivatives, 365.

$C_{15}H_{10}O_2N_4$. Methylphenyl-1,2,4,5-diimidazolo-3,6-benzoquinone, preparation, properties, 1073.

$C_{15}H_{10}O_7N_4$. Quinoline picrate, formation, 2258.

$C_{15}H_{11}ON$. 8-Phenoxyquinoline, preparation, properties, formation of picrate, 1264.

$C_{15}H_{11}O_2N$. 8-(p-Hydroxyphenoxy)-quinoline, preparation, properties, 1265.

$C_{15}H_{11}O_3Br$. m-Benzoylhydroxy-ω-bromoacetophenone, preparation, properties, reaction with benzylmethylamine, 562.

$C_{15}H_{12}ON_2$. 8-(p-Aminophenoxy)-quinoline, preparation, properties, formation of picrate of ester 1264.

$C_{15}H_{13}NBr_2$. Bromocinnamylideneaniline hydrobromide, preparation, properties, 556.

$C_{15}H_{14}NCl$. Hydrochloride of anil and product of its isomerization, 555.

$C_{15}H_{15}O_4Cl$. Product of methanolysis of ester of α-keto alcohol and reaction with $C_6H_5MgBr$, 1427.

$C_{15}H_{16}ON_2$. 8-(p-Aminophenoxy)-tetrahydroquinoline, preparation, properties, formation of hydrochloride, acetylation, diazotization, 1265.

$C_{15}H_{17}O_2N_5$. 8-Phenylaminomethylcaffeine, preparation, 602.

$C_{15}H_{18}O_2N_2$. 3-Acetamino-8-butoxyquinoline, preparation, properties, 1267.

$C_{15}H_{18}O_4N_2$. 5,7-Diacetamino-ac-tetrahydro-1-naphthoic acid, preparation, 1091.

$C_{15}H_{19}ON$. 8-Hexoxyquinoline, preparation, properties, picrate, 1266.

$C_{15}H_{19}O_2Cl$. 9-Chloroanthracene-10-carboxylic acid, preparation, 198.

$C_{15}H_{19}O_2N$. 8-Hexoxyquinoline N-oxide, preparation, properties, 1271.

$C_{15}H_{20}O_4S$. p-Butylsulfonylbenzaldehyde diacetate, formation, preparation of aldehyde, 1707.

$C_{15}H_{21}O_2N$. Dimethylaminoethyl ester of ac-α-, and β-tetrahydronaphthoic acids, preparation, properties, 386, 389.

$C_{15}H_{21}O_5N$. 1) Isobutyl ester of N-carbisopropoxy-p-aminosalicylic acid, preparation, solubility, 2072.

2) Isopropyl ester of N-carbisobutoxy-p-aminosalicylic acid, preparation, solubility, 2073.

$C_{15}H_{23}ON_3$. Semicarbazone of cis-$\Delta^{9,5}$-dodecahydrophenanthren-4-one, preparation, properties, 277.

$C_{15}H_{25}O_3P_2$. Triethyl ester of β-phenyl-β-phosphonopropionic acid, preparation, properties, saponification, 1190.

$C_{15}H_{25}O_5P$. Ethyl ester of 4-phosphonomethyl-2-anisyldioxolan-1,3, preparation, properties, hydrolysis, 1245.

$C_{15}H_{26}O_6N_2$. Phenylhydrazide of 3,4,6-trimethylmannonic acid, δ-lactone, preparation, 307.

$C_{15}H_{25}ON$. Cyclohexenyl-β-(N-piperidyl)-propyl ketone, preparation, properties, picrate, 1840.

$C_{15}H_{25}ON_3$. Smicarbazone of cis-perhydrophenanthren-4-one, preparation, 277; of isobutanonyl-6-dipentene, formation, 1001.

$C_{15}H_{25}O_2N_5$. 8-Diethylaminopropylcaffeine, preparation, 2282.

$C_{15}H_{27}O_5N$. Macrotomine, extraction from Makrotomia echioides, solubility, formation of picrate, saponification, oxidation, 1500.

$C_{15}H_{29}ON_3$. Semicarbazone of 4-methyl-2-heptylcyclohexanone, formation, 1211.

15. IV

$C_{15}H_{13}O_2N_2Br$. Coordination compound of β-bromoethylphthalimide with pyridine, 325.

$C_{15}H_{14}O_5N_2S$. Product of action of HCl on 1-S-(2-phenyl-5-oxazolonyl-methylen-4)-N-acetylcysteine, preparation, solubility, 2254.

$C_{15}H_{16}ON_2S_2$. 5-(1'-Methyl-3'-ethylbenzimidazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one (4), synthesis, properties, 215.

$C_{15}H_{15}O_2N_3S$. Thiosemicarbazone of 4-benzyloxy-2-hydroxybenzaldehyde, formation, 2052.

$C_{15}H_{16}O_3N_2S$. p-Acetaminophenyl anilyl methane sulfone, preparation, properties, reaction with HCl, 349.

$C_{15}H_{17}O_5NS$. 2-(α-Phenyl-α-carbomethoxymethyl)-N-acetylthiazolidine-4-carboxylic acid, preparation, action of sodium hydroxide, 1083.

$C_{15}H_{19}ONS$. Anilide of 2,5-dimethyltetrahydro-4-thiopyrylideneacetic acid, preparation, 907.

$C_{15}H_{19}O_4NS$. Methyl ester of 2-(α-phenyl-α-carbethoxymethyl)-thiazolidine-4-carboxylic acid, preparation, 1080.

$C_{15}H_{21}O_2NS$. Anilide of 2,5-dimethyltetrahydro-4-thiopyranol-4-acetic acid, preparation, 906.

$C_{15}H_{24}O_4N_5Cl$. Dimethylaminoethyl ester of β-(caffeine-8)-propionic acid (hydrochloride), preparation, properties, 598.

$C_{15}H_{28}O_4NP$. α-(β-Cyanethyl)-α-diethylphosphonocaproic acid ethyl ester, preparation, properties, 2186.

15. V

$C_{15}H_{33}O_{18}P_3Na_3I$. Product of reaction of allyl iodide and sodium di-β-methoxyethyl-phosphite, 320.

## Group $C_{16}$

### 16. II

$C_{16}H_{12}O_2$. 1) 9-Methylanthracene-10-carboxylic acid, formation, 200.

2) 2-Methyl-4-phenyl-2-penten-4-ol oxide, preparation, properties, cleavage, 1438.

$C_{16}H_{14}N_4$. Methylbenzyldiimidazolo-1,2,4,5-benzene, preparation, 1067.

$C_{16}H_{18}O_2$. Diphenylbutynediol, preparation of methyl and ethyl ethers of, 1873.

$C_{16}H_{18}O_3$. Ethyl ester of γ-(2-hydroxynaphthyl-3)-butyric acid, preparation, 1694.

$C_{16}H_{18}O_3$. 1) Phenylhydroxyacetic acid, product of reaction of 2,5-dimethyl-5-p-hydroxyphenyl-1-hexen-3-yne with chloroacetic acid, 522.

2) γ-(2-Ethoxynaphthyl-3)-butyric acid preparation, 1693.

$C_{16}H_{20}O_4$. 1) β-(2-Ethoxy-5,6,7,8-tetrahydronaphthoyl-3)-propionic acid, preparation, formation of ethyl ester, and its dehydration, oxidation, 1692.

2) Ethyl ester of 2-hydroxytetrahydronaphthoyl-3-propionic acid, preparation, 1692.

$C_{16}H_{22}O_6$. Product of alcoholysis of 1,3-di-β-cyanoethoxybenzene, 1686.

$C_{16}H_{32}S$. β-Tetralyl cyclohexyl sulfide, constants, 164.

$C_{16}H_{24}O_3$. 6-Dipentenylacetoacetic ester, preparation, properties, cleavage, 1000.

$C_{16}H_{26}S$. Phenyl decyl sulfide, constants, 162.

$C_{16}H_{30}O_2$. $\Delta^{2,3}$-Hexadecenoic acid, preparation, properties, structure, formation of silver and lead salts, ethyl ester, 2038.

$C_{16}H_{32}O_3$. α-Hydroxypalmitic acid, formation, 2038.

$C_{16}H_{32}S$. Cyclohexyl decyl sulfide, constants, 162

$C_{16}H_{34}O$. Triisoamylcarbinol, preparation, properties, 1386.

### 16. III

$C_{16}H_{10}O_2N_2$. 1-Benzeneazo-3,4-naphthoquinone, preparation, cleavage, 741.

$C_{16}H_{11}O_2N$. 2-Phenyl-4-benzyliden-5-oxazolone, reaction with thioacetic acid, 321.

$C_{16}H_{12}N_2S_2$. Bis-benzothiazolylmethylmethane, preparation, properties, UV absorption spectra, 365.

$C_{16}H_{12}O_2N_2$. 1) 1-Benzeneazo-3,4-dihydroxynaphthalene, hydrolytic and oxidative transformations of, 739.

2) 2-Phenyl-4-anilinomethylene-oxazolinone, preparation, reaction with aniline, 937.

$C_{16}H_{12}O_4N_2$. 1) 1,6-Diacetoxyphenazine, preparation, 766. 1,8-diacetoxyphenazine, preparation, 767.

2) Diacetyl derivative of 1,5-dihydroxyphenazine, preparation, 766.

3) Glycyl-threonine, preparation, properties, biuret reaction, 1681.

$C_{16}H_{12}O_7N_4$. Quinaldine picrate, formation, 2259.

$C_{16}H_{12}O_9N_4$. Picrate of 8-methoxyquinoline N-oxide, preparation, 1271.

$C_{16}H_{13}O_2N$. 1) 2-Phenyl-4-benzyl-5-oxazolone, reaction with thioacetic acid, 321.

2) 5-Phenoxy-8-methoxyquinoline, preparation, properties, formation of picrate, 1265.

$C_{16}H_{14}O_3S$. Hydrogenation product of sulfone of thiochromanone, preparation, 1288.

$C_{16}H_{14}O_9N_4$. 1) Picrate of hydroxydihydrolepidine, formation, 2127.

2) Indicain picrate, formation, 2298.

$C_{16}H_{14}O_9N_4$. Plantagonin picrate, formation, 2298.

$C_{16}H_{18}N_2S_2$. 2-Methyl-6-(N-benzylthiocarbamido-N')-benzothiazole, preparation, properties, absorption maximum, 377.

$C_{16}H_{15}O_3N$. 4-Acetamino-2-benzylhydroxybenzaldehyde, preparation, properties, thiosemicarbazone, 1701.

$C_{16}H_{16}NCl$. Hydrochloride of p-methylanil, and o-methylanil, 556.

$C_{16}H_{16}O_2N_2$. 1-Ethoxy-10-ethylphenazinone-3, preparation, 2265; -ethylphenazinone-6, preparation, properties, 2265.

$C_{16}H_{16}O_3N_2$. 1,5-Diethoxyphenazine mono-N-oxide, preparation, 1917; 1,6-diethoxyphenazine mono-N-oxide, preparation, properties, 1917; 1,8-diethoxyphenazine mono-N-oxide, preparation, 1917.

$C_{16}H_{17}O_2N$. 4-Acetamino-2-benzylhydroxytoluene, formation, 1702.

$C_{16}H_{18}O_4N_2$. N-Acetyl-2-hydroxy-4-methyl-5-carbethoxy-6-phenyldihydropyrimidine, preparation, 1728.

$C_{16}H_{20}O_6N_4$. Diethyl ester of (caffeine-8)-methylene-malonic acid, preparation, 595.

$C_{16}H_{21}ON$. 8-Heptoxyquinoline, preparation, properties, hydrate, 1266.

$C_{16}H_{21}O_2N$. 8-Heptoxyquinoline N-oxide, preparation, properties, 1271.

$C_{16}H_{22}O_4Hg$. Orthotolylmercury azelate, 116.

$C_{16}H_{22}O_6N_4$. Diethyl ester of β-(caffeine-8)-isosuccinic acid, preparation, properties, 596.

$C_{16}H_{23}O_2N$. Propionate of 1,2-dimethyl-4-phenyl-4-piperidol, preparation, properties, 1712.

$C_{16}H_{23}O_5N$. Isobutyl ester of N-carbisobutoxy-p-aminosalicylic acid, preparation, solubility, 2072.

$C_{16}H_{25}O_2N$. 1,2,6,6-Tetramethyl-7-oxa-4-vinylethinyl-4-hydroxydecahydroquinoline, preparation, hydrogenation, 1458.

$C_{16}H_{25}O_5N$. 1) 2,3,4,6-Tetramethylglucose anilide, synthesis, 171,

2) Anilide of 2,3,4,6-tetramethylmannose, 307.

$C_{16}H_{25}O_6N$. Ethyl ester of β-(α'-cyano-α'-carbethoxy)-propylglutaric acid, preparation, properties, 1515.

$C_{16}H_{25}O_7P$. Ethyl ester of α-diethylphosphon-β-furil-γ-acetobutyric acid, preparation, properties, 2185.

$C_{16}H_{27}N_4Cl$. Benzal-$N^4$-octylaminoguanyl hydrochloride, synthesis, 159.

$C_{16}H_{27}O_5P$. 1-Furyl-diisobutylphosphobutanone, preparation, 529; -1-dibutylphosphobutanone-3, preparation, 529.

$C_{16}H_{29}O_2Ag$. Silver salt of $\Delta^{2,3}$-hexadecenoic acid, preparation, 2039.

$C_{16}H_{16}ON_2$. 1,5-Bis-N-piperidylhexan-3-one, preparation, properties, picrate, 1838.

$C_{16}H_{31}O_2Br$. α-Bromopalmitic acid, preparation, properties, action of alcoholic KOH, 2037.

$C_{16}H_{31}O_2N$. 1,2,6,6-Tetramethyl-7-oxa-4-butyl-4-hydroxydecahydroquinoline, preparation, formation of hydrochloride, 1458.

$C_{16}H_{31}O_7P$. Methyl ethyl ester of α-n-butyl-α-diethylphosphonglutaric acid, preparation, properties, 2186.

$C_{16}H_{33}O_3N$. N,N-di-(propanol-2-butoxy-3)-acetamide, analysis, 989.

$C_{16}H_{36}O_4Ti$. Butyl ester of orthotitanic acid, preparation, analysis, 629.

$C_{16}H_{36}O_3P_2$. 1-Diethylphosphone-2-methyl-6-methoxyhexanone, preparation, properties, 1419.

16. IV

$C_{16}H_{11}ONS$. 2-Phenyl-4-benzyliden-5-thiazolone, preparation, hydrolysis, 322.

$C_{16}H_{11}O_3NS_2$. 1) Sultone sulfanilide, preparation, properties, 1668.

2) Anilide of 1-naphthol-3,8-disulfonic acid, preparation, properties, 1669.

3) Anilides of sulfones of isomeric sulfonic acids, preparation, properties, 1670.

$C_{16}H_{12}ON_2S_2$. Bis-[benzothiazolyl-(2)]oxide, preparation, 777.

$C_{16}H_{13}ONS$. 2-Phenyl-4-benzyl-5-thiazolone, preparation, 323.

$C_{16}H_{13}O_2NS$. α-Thiobenzoylaminocinnamic acid, preparation, reaction with acetic anhydride, piperidide, 322.

$C_{16}H_{14}ON_2S_2$. 1) 5-(1'-Ethyldihydroquinolylidene-4'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 215.

2) 5-(1'-Ethyldihydroquinolylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 216.

$C_{16}H_{14}O_7N_4S$. Picrate of 2,4,5-trimethylbenzothiazole, formation, 940; of 2,4,7-trimethylbenzothiazole, 941; of 2,5,7-trimethylbenzothiazole, 941.

$C_{16}H_{15}O_4N_3S_2$. 3-Diacetylamino-5-(acetyl-anilinomethylene)-rhodanine, preparation, absorption maximum, 771.

$C_{16}H_{16}ON_2S_2$. 3-Ethyl-5-(3'-ethylbenzothiazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 215.

$C_{16}H_{16}O_2N_2S_2$. 3-Ethyl-5-(3'-ethylbenzoxazolinylidene-2'-ethylidene)-thiazolidine-thion-(2)-one-(4), synthesis, properties, 216; -(3'-ethylbenzothiazolinyliden-2'-ethylidene)-thiazolidinedione-(2,4), preparation, properties, absorption maximum, 1276.

$C_{16}H_{16}O_2N_4S$. 4-Benzoylamino-3-methoxybenzalthiosemicarbazone, formation, 1703.

$C_{16}H_{16}O_3N_4S$. Benzyl 8-caffeinethiolcarboxylate, preparation, properties, desulfurization, 2287.

$C_{16}H_{16}O_4N_2S_2$. 2,2'-Dinitro-4,5,4',5'-tetramethyldiphenyl disulfide, preparation, reduction, 584.

$C_{16}H_{17}O_3N_2Cl$. m-Nitro-ω-benzylmethylaminoacetophenone, hydrochloride, preparation, properties, reduction, 560.

$C_{16}H_{18}O_3NCl$. m-Hydroxy-ω-benzylmethylaminoacetophenone hydrochloride, preparation, properties, 563.

$C_{16}H_{19}O_5NS$. 1) 2-(α-Phenyl-α-carbethoxymethyl)-N-acetylthiazolidine-4-carboxylic acid, preparation, solubility, 1081.

2) S-β-(α-Phenyl-α-carbethoxy)-ethylene-N-acetylcysteine, preparation, solubility, 1083.

$C_{16}H_{26}O_4N_2S_2$. Di-(ethanesulfo)-benzidide, preparation, 1472.

$C_{16}H_{24}O_4N_2Br_2$. 1,4-Di-(α-bromonorcapryl)-2,5-diketopiperazine, preparation, properties, condensation with ethyl glycocollate, 2222.

$C_{16}H_{27}O_3PN_2$. Phenylhydrazone of 4-methyl-4-diethylphosphonpentanone, preparation, 1418.

16. V

$C_{16}H_{12}O_6NS_2K$. Potassium salt of 1-naphthol-4-sulfanilid-8-sulfonic acid, preparation, 1669.

$C_{16}H_{15}O_3N_2S_3F_3$. 2-Amino-6-trifluoromethylmercaptobenzthiazole, p-toluenesulfonate, preparation, 2276.

$C_{16}H_{16}ON_2S_3Se$. 3-Ethyl-5-(3'-ethylbenzoselenazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 215.

$C_{16}H_{22}O_4N_3S_2Cl$. 2-Methyl-6-(N-allyl-S-ethylisothiocarbamido-N')-benzothiazole ethyl perchlorate, preparation, properties, 378.

$C_{16}H_{26}O_8N_2S_2Cl_2$. Diethyl perchlorate of α,ω-di[4-methylthiazolyl-(2)]-butane, preparation, 933.

Group $C_{17}$

17. I

$C_{17}H_{14}$. 1,4-Diphenyl-1,3-cyclopentadiene, formation, picrate, 1430, 1435.

$C_{17}H_{18}$. 1,3-Diphenylcyclopentane, formation, 1431.

17. II

$C_{17}H_{12}O_2$. β-(Anthranil-9)-acrylic acid, preparation, properties, formation of sodium salt, methyl ester, 1698.

$C_{17}H_{14}N_2$. α,β-Diphenylglutaric acid nitrile, preparation, conversion to 3,4-diphenylpiperidine, 720.

$C_{17}H_{14}O_3$. 1) α,β-Endo-(9,10-dihydroanthranil-9,10)-propionic acid, preparation, formation of sodium salt, 1698.

2) β-(anthranil-9)-propionic acid, preparation, properties, sodium salt, 1699.

$C_{17}H_{16}O_3$. 4-Benzyloxy-2-hydroxystyryl methyl ketone, preparation, properties, hydrogenation, 2052.

$C_{17}H_{16}N_4$. Methyl-β-phenylethyldimidazolo-1,2,4,5-benzene, preparation, 1067.

$C_{17}H_{19}N$. 3,4-Diphenylpiperidine, preparation, 721.

$C_{17}H_{19}O_2$. Phenylurethane of 2-phenylbutanol-2, preparation, 1214.

$C_{17}H_{22}N_2$. Tetramethyldiaminodiphenylmethane, absorption spectrum, 884.

$C_{17}H_{22}O$. Product of reaction of myrtenyl magnesium halide, benzaldehyde, formation, properties, 1632.

$C_{17}H_{26}O_3$. 6-Dipentenylmethylacetoacetic ester, preparation, properties, ketonic cleavage, 1001.

$C_{17}H_{26}O_4$. 6-Dipentenylmalonic ester, preparation, properties, saponification, 1001.

$C_{17}H_{26}O$. 4-Tertiary-butyl-2-heptylidene-cyclohexanone, preparation, properties, hydrogenation, 1210.

$C_{17}H_{32}O$. 4-tert-Butyl-2-heptylcyclohexanone, preparation, properties, formation of oxime, semicarbazone, p-nitrophenylhydrazone, 1211.

17. III

$C_{17}H_{12}NI$. Paramethylcinnamylideneaniline methiodide, preparation, 556.

$C_{17}H_{12}N_6O_{16}$. Compound of 2,4-dinitrophenol and pyridine, 2146.

$C_{17}H_{14}N_2S_2$. 1) Bisbenzothiazolylethylmethane, preparation, properties, UV absorption spectra, 365.

2) Bisbenzothiazolyldimethylmethane, preparation, properties, UV absorption spectra, 365.

$C_{17}H_{14}ON_2$. Methylbetaine of 6-benzoylaminoquinoline, preparation, properties, 1907.

$C_{17}H_{14}O_2N_2$. 8-(p-Acetaminophenoxy)-quinoline, preparation, properties, 1264.

$C_{17}H_{15}N_5O_6$. Compound of p-nitrophenol and pyridine, 2145.

$C_{17}H_{15}O_4N_5$. 8-Aminomethylcaffeine, preparation, properties, formation of hydrochloride, 600.

$C_{17}H_{16}O_2N_2$. β-(N-methyl-N-phenyl)-aminoethylphthalimide, preparation, action of heat, 326.

$C_{17}H_{17}NO_5$. Product from reaction of acids with haploperine, formation, 1105.

$C_{17}H_{18}NI$. Paramethylcinnamylideneaniline methiodide, preparation, properties, 556.

$C_{17}H_{18}O_3N_2$. 1-Ethoxy-5-methoxy-10-ethylphenazinone-6, preparation, 2265; -7-methoxy-10-ethylphenazinone-6, preparation, 2265.

$C_{17}H_{19}NO_6$. Haploperine, extraction, formation of hydrochloride, action of HCl and $H_2SO_4$, methyl iodide, hydrogenation, 1105.

2) Isohaploperine, preparation, 1106.

$C_{17}H_{19}O_2N_5$. 8-Benzylaminoethylcaffeine, preparation, 602.

$C_{17}H_{20}ON_2$. Michler's ketone, bromination, 1463.

$C_{17}H_{20}O_2N_2$. Diethylamino ester of 7-amino-ac-tetrahydro-1-naphthoic acid (hydrochloride), preparation, properties, 1090.

$C_{17}H_{21}O_2N$. Phenylurethane of myrtenol, preparation, structure, 867.

$C_{17}H_{21}O_3N$. Galantamine, isolation, properties, formation of nitrate, perchlorate, hydrochloride, chloroplatinate, methyl iodide addition product, acetylation, action of alcoholic KOH, 1942.

$C_{17}H_{21}O_3N_3$. Condensation product of 2-hydroxy-4-methyl-5-carbethoxydihydropyrimidine and p-dimethylaminobenzaldehyde formation, solubility, 1726.

$C_{17}H_{22}O_8N_4$. Picrate of 1,2-dimethyl-4-ketodecahydroquinoline, formation, 688.

$C_{17}H_{23}N_3Cl_2$. N,N'-Diphenyl-β-dimethylaminopropylamidine-dihydrochloride, preparation, solubility, 2089.

$C_{17}H_{23}ON$. 8-Octoxyquinoline, preparation, properties, picrate, 1266.

$C_{17}H_{23}O_2N$. 8-Octoxyquinoline N-oxide, preparation, properties, 1271.

$C_{17}H_{23}O_3N$. Dihydrogalantamine, preparation, properties, acetylation, hydrobromide of acetyl product, 1943.

$C_{17}H_{25}O_6N$. Hexahydrohaploperine, preparation, properties, 1106.

$C_{17}H_{26}N_2O_9$. Phenylhydrazone of galactosido-2-d-arabinose, formation, 301.

$C_{17}H_{26}O_9N_2$. Glucosido-2-d-arabinose hydrazone, synthesis, 176.

$C_{17}H_{27}O_2N$. γ-Diethylaminopropyl ether of 2-methoxy-6-allylphenol, preparation, properties, formation of hydrochloride, formation of salt with 1,5-disulfoacid of naphthalene, 1689.

$C_{17}H_{31}O_7N$. Acetate of N,N-di(propanol-2-isopropoxy-3)-formamide, preparation, properties, 987.

$C_{17}H_{33}O_7P$. Methyl ethyl ester of α-methyl-α'-n-butyl-α'-diethylphosphonoglutaric acid, preparation, properties, 2186.

$C_{17}H_{35}O_4P$. 1-Butoxy-5-dibutylphosphopentene-3, synthesis, properties, 129.

17. IV

$C_{17}H_{12}O_3NCl$. Phthalylphenylalanylchloride, preparation, properties, 2213.

$C_{17}H_{13}O_3NS$. N-p-toluenesulfonyl-1,4-naphthoquinonimine, preparation, properties, reactions, 1056.

$C_{17}H_{15}O_3NS$. N-p-toluenesulfonyl-1,4-aminonaphthol, preparation, properties, reactions, 1056.

$C_{17}H_{15}O_4N_4I$. Methyl iodide salt of 6-(N-methyl-2',4'-dinitroanilino)-quinoline, preparation, 2061.

$C_{17}H_{18}N_2O_2S$. 6-(N-methyl-p-toluenesulfonamido)-quinoline, preparation, formation of methyl iodide, 2060.

$C_{17}H_{16}O_3N_2S$. 6-Methoxy-8-(p-tolylsulfonamido)-quinoline, preparation, properties, formation of methyl-methosulfate, 1905.

$C_{17}H_{18}ON_2S_2$. 5-(1'-Ethyl-3',3'-dimethylindolinyl-idene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 215.

$C_{17}H_{19}O_2N_5S$. 4-Acetamino-2-benzylhydroxybenzalthiosemicarbazone, preparation, 1702.

$C_{17}H_{18}O_5N_2S$. S-(2-Phenyl-5-oxazolonylmethylen-4)-N-acetylpenicillamine, preparation, solubility, 2255.

$C_{17}H_{19}ON_2Br$. 1) Oxidation product of bromide from α,α-di-(p-dimethylaminophenyl)-β-phenylethylene, 1463.

2) Bromide from α,α-di-(p-dimethylaminophenyl)-β-phenylethylene, preparation, oxidation, analysis, 1463.

$C_{17}H_{19}ON_2I$. 2-(β-Acetanilinovinyl)-pyridine ethiodide, synthesis, 212.

$C_{17}H_{19}ON_3S_2$. 3-Ethyl-5-(1'-methyl-3'-ethylbenzimidazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 215.

$C_{17}H_{20}O_6N_2S$. 1) α-Benzoyl-β-S-(acetyl-penicillamine)-acrylic acid, preparation, solubility, 2255.

2) 1-Methoxy-7-ethoxyphenazine-methylmethosulfate, preparation, properties, 2263.

$C_{17}H_{22}ONBr_2$. 5,7-Dibromo-8-octoxyquinoline, preparation, properties, 1267.

$C_{17}H_{21}ONCl_2$. 5,7-Dichloro-8-octoxyquinoline, preparation, properties, 1267.

$C_{17}H_{25}ONS$. Diethylaminoethyl ester of ac-α-tetrahydronaphthoic acid, preparation, properties, 388.

$C_{17}H_{27}O_2N_3S_4$. 1) Triethylamine salt of 5-(4'-hydroxythiazolinethion-(2')-yl-5'-methylene)-thiazolidinethion-(2)-one-(4), synthesis, 213.

2) Triethylamine salt of 3-ethyl(3'-ethyl-4'-hydroxythiazolinethion-(2')-yl-5'-methylene)-thiazolidinethion-(2)-one-(4), synthesis, 213.

17. V

$C_{17}H_{21}N_2O_3S_2Cl$. 2-Methyl-6-aminobenzothiazole ethyl-p-tolusulfonate hydrochloride, preparation, properties, absorption maximum, 376.

Group $C_{18}$

18. I

$C_{18}H_{12}$. 1) Triphenylene, preparation, formation of picrate, 289.

2) 3,4-Benzphenanthrene, preparation, formation of picrate, 1469.

$C_{18}H_{16}$. 1,2,3,4-Tetrahydronaphthacene, preparation, 205; addition of alkali metals to, 205.

$C_{18}H_{30}$. Diphenylcyclohexanes, formation, 1431.

$C_{18}H_{32}$. $\Delta^{2,3}$-hexadecahydrotriphenylene, preparation, properties, dehydrogenation, picrate, 288.

18. II

$C_{18}H_{12}O$. 6-Hydroxy-3,4-benzphenanthrene, preparation, formation of picrate, 1469.

$C_{18}H_{14}Br_2$. 6,11-Dibromo-1,2,3,4-tetrahydronaphthacene, preparation, solubility, reaction with phenyllithium, n-butyllithium, 1928.

$C_{18}H_{14}O_2$. Methyl ester of β-(anthranil-9)-acrylic acid, formation, action of sodium amalgam, 1699.

$C_{18}H_{15}Bi$. Triphenylbismuth, reaction with thiosalicylic acid, 708.

$C_{18}H_{15}Br$. 6-Bromo-1,2,3,4-tetrahydronaphthacene, preparation, solubility, 1928.

$C_{18}H_{15}N$. Di-m-phenylaniline, absorption spectrum, 884.

$C_{18}H_{15}P$. Triphenylphosphine, preparation, 856.

$C_{18}H_{16}O$. 6-Keto-6,7,8,8a,9,10-hexahydro-3,4-benzphenanthrene, preparation, formation of 2,4-dinitrophenylhydrazone, dehydrogenation, 1469.

$C_{18}H_{16}O_3$. Oxidation product of methylated isothebaine, formation, 2294.

$C_{18}H_{18}O$. 1) 1,2,3,4,6,11-Hexahydronaphthacenol-6, formation, 205.

2) 2,4-diphenyl-5,5-dimethyldihydrofuran-2,5, preparation, 402.

$C_{18}H_{18}O_2$. 1) 9,10-Di-β-hydroxyethylanthracene, formation, 200.

2) 1-(Acetoxymethyl)-2,2-diphenylcyclopropane, preparation, properties, hydrolysis, Raman spectra, 1400.

3) Methyl ether of diphenylbutynediol, preparation, properties, bromination, hydrogenation, 1874.

4) Partial ethyl-ether of diphenylbutynediol, preparation, properties, 1874.

5) 2,5-Diphenylhexyne-3-diol-2,5, reaction with phenol, 1879.

$C_{18}H_{18}O_3$. Product of condensation of a vinylacetylenic phenol with chloroacetic acid, 522.

$C_{18}H_{20}O$. 2,4-Diphenyl-5,5-dimethyltetrahydrofuran, preparation, 402.

$C_{18}H_{20}O_2$. Hydrogenation product of full methyl ether of diphenylbutynediol, preparation, properties, oxidation, 1876.

$C_{18}H_{22}O_2$. Product of full hydrogenation of the full methyl ether of diphenylbutynediol, preparation, properties, 1877.

$C_{18}H_{30}O$. $\Delta^{2,3}$-hexadecahydrotriphenylen-1-one, preparation, properties, dinitrophenylhydrazone, Clemensen reduction, 288.

$C_{18}H_{28}O_2$. Terapinic acid, from oil of perca shrenki, formation, bromination, 1294.

$C_{18}H_{30}O$. Tributylphenol, preparation, properties, 1016.

$C_{18}H_{32}O_7$. Diethyl ester of β-carbethoxy-β-(α'-ethoxymetho)-propylglutaric acid, preparation, properties, action of KOH and methyl alcohol, 1934.

$C_{18}H_{34}O_2$. 1) Petroselinic and petroselaidic acids, hydrogenation and oxidation, structure, 1187.

2) Ethyl ester of $\Delta^{2,3}$-hexadecenoic acid, formation, solubility, 2039.

$C_{18}H_{34}O_4$. Ricinoleic acid oxide, preparation, properties, 2036.

$C_{18}H_{36}O_2$. Stearic acid, reaction with dimethylmercury, 1183.

$C_{18}H_{36}O_3$. α-Ethoxypalmitic acid, preparation, properties, 2039.

18. III

$C_{18}H_9Hg_4ClO$. Dimercurated derivative of p-chlorophenol, 111.

$C_{18}H_{13}Hg_2ClO$. Dimercurated derivative of p-chlorophenol, 111.

$C_{18}H_{19}O_9N_7$. Product of reaction of 2-hydroxy-4-methyl-5-nitro-6-nitrophenyl-dihydropyrimidine-5-carboxylic acid and p-nitrodiazobenzene, formation, 1730.

$C_{18}H_{14}O_7N_4$. Picrate of methylphenylpyridine, formation, 2021.

$C_{18}H_{15}OP$. Triphenylphosphine oxide, preparation, 858.

$C_{18}H_{16}N_2S_2$. 1) Bisbenzothiazolyl-iso-propylmethane, preparation, properties, UV absorption spectra, 365;

-n-propylmethane, preparation, properties, UV absorption spectra, 365.

2) Dibenzothiazolylisopropylmethane, preparation, properties, 370.

$C_{18}H_{16}O_4Hg_2$. Orthoditolylmercury maleate, 116.

$C_{18}H_{18}O_2Br_2$. Bromination product of methyl ether of diphenylbutynediol, preparation, properties, 1876.

$C_{18}H_{18}O_4Hg_2$. Orthoditolylmercury succinate, synthesis, 115.

$C_{18}H_{18}O_6Hg_2$. Orthoditolylmercury tartrate, 116.

$C_{18}H_{19}N_3S_2$. 2-Methyl-6-(N-benzyl-S-ethylisothiocarbamido-N')-benzthiazole, preparation, properties, formation of p-toluenesulfonate, ethiodide, 378.

$C_{18}H_{19}O_2Cl$. α-(3-Chlorocrotyl)-γ-(2-naphthyl)-butyric acid, preparation, properties, action of sulfuric acid and $CO_2$, 1468.

$C_{18}H_{19}O_3N$. Phenylurethane of 2-phenylpentanol-2-one-3, preparation, 1214.

$C_{18}H_{19}O_6N$. Isohaploperine, preparation, properties, structure, 1106.

$C_{18}H_{18}O_{10}N_8$. N-Glycyl-dimethylaminoacetamidine dipicrate, preparation, 2088.

$C_{18}H_{20}O_3N_2$. 1,5-Diethoxy-10-ethylphenazinone-6, preparation, 2265; 1,8-diethoxy-10-ethylphenazinone-3, preparation, 2266.

$C_{18}H_{23}O_3N$. N-methylgalantamine, preparation, formation of picrate, perchlorate, methyl iodide addition product, 1943.

$C_{18}H_{24}O_2N_2$. Piperidide of N-benzoylamino-β-methyl-β-ethylacrylic acid, 1926.

$C_{18}H_{24}O_8N_4$. Cyclohexenyl-β-dimethylaminopropyl ketone, preparation, properties, picrate, hydrogenation, 1839.

$C_{18}H_{24}O_9N_4$. Picrate of 1,2,6,6-tetramethyl-7-oxa-4-ketodecahydroquinoline, formation, 1457.

$C_{18}H_{25}ON$. 8-Nonoxyquinoline, preparation, properties, 1266.

$C_{18}H_{25}O_2N$. 8-Nonoxyquinoline N-oxide, preparation, properties, 1271.

$C_{18}H_{25}O_4N$. N-Hendecenoyl-p-aminosalicylic acid, preparation, solubility, 2070.

$C_{18}H_{27}O_2N$. 1,2,6,6-Tetramethyl-7-oxa-4-phenyl-4-hydroxydecahydroquinoline, preparation, formation, of hydrochloride, benzoate, 1459.

$C_{18}H_{27}O_4N$. N-Hendecanoyl-p-aminosalicylic acid, preparation, solubility, 2070.

$C_{18}H_{27}O_5P$. α-Diethylphosphono-β-phenyl-γ-acetobutyric acid ethyl ester, preparation, properties, 2185.

$C_{18}H_{28}O_2Br_2$. 1) Insoluble bromides from oil of perca shrenki, formation, 1293.

2) Bromination product of terapinic acid, 1294.

$C_{18}H_{28}O_{10}N_2$. Glucosido-2-galactose phenylhydrazone synthesis, properties, 170.

$C_{18}H_{29}O_4P$. 1-Phenyl-1-dibutylphosphonebutanone-3, 529; -diisobutylphosphonebutanone-3, preparation, properties, 529.

$C_{18}H_{30}O_3S_3$. Polymer of unsaturated ketothiol, preparation, properties, cleavage, 1041.

$C_{18}H_{34}O_2Br_2$. Bromination product of oleic acid from oil of perca shrenki, 1294.

$C_{18}H_{35}ON_3$. Oxime of 4-tert.-butyl-2-heptylcyclohexanone, formation, 1211.

18. IV.

$C_{18}H_{19}OCl_2Hg$. Dimercurated derivative of p-chlorophenol, 111.

$C_{18}H_{12}Hg_2N_2O_5$. Dimercurated derivative of 2,4-dinitrophenol, 110.

$C_{18}H_{13}Hg_2Cl_3O$. Dimercurated derivative of 2,4-dichlorophenol, 111; of 2,4,6-trichlorophenol, 111.

$C_{18}H_{13}Hg_2NO_3$. Dimercurated derivative of p-nitrophenol, 109; of o-nitrophenol, 110.

$C_{18}H_{14}ON_2S_3$. 1) 5-(3'-Ethyl-6',7'-benzobenzothiazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 215.

2) 5-(3'-Ethyl-4',5'-benzobenzothiazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 215.

$C_{18}H_{14}O_2N_2S_2$. 5-(3'-Ethyl-4',5'-benzobenzoxazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 216.

$C_{18}H_{15}ClPCu$. Cuprous chloride addition product with triphenylphosphine, preparation, 2114.

$C_{18}H_{18}O_8N_2S_2$. Diethyl ester of 2,2'-dithiodi-4-nitrobenzoic acid, preparation, properties, action of ammonia, 1897.

$C_{18}H_{17}O_3N_3S_3$. 3-Diacetylamino-5-(3'-ethylbenzothiazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), preparation, 773.

$C_{18}H_{17}O_4N_3S_2$. 3-Diacetylamino-5-(3'-ethyl benzoxazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), preparation, 772.

$C_{18}H_{18}ON_2S_2$. 1) 3-Ethyl-5-(1'-ethyldihydroquinolylidene-4'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 215.

2) 3-Ethyl-5-(1'-ethyldihydroquinolylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 216.

$C_{18}H_{18}O_3N_2S$. 6-Methoxy-8-(N-methyl-p-toluenesulfonamido)-quinoline, preparation, formation of methyl iodide, 2062.

$C_{18}H_{18}O_5N_2S$. p-Acetylaminophenyl-p'-acetylaminophenacyl sulfone, preparation, properties, 341.

$C_{18}H_{20}O_3N_4S$. Benzyl-β-(caffeine-8)-thiolpropionate, preparation, conversion to 8-(3-hydroxypropyl)-caffeine, 2281.

$C_{18}H_{21}N_3Cl_6O_2$. 1,1,1-Trichloro-bis-p,p'-(salicylideneaminophenyl)-ethane, preparation, 1011.

$C_{18}H_{21}O_2N_2Cl$. m-Acetylamino-ω-benzylmethylaminoacetophenone hydrochloride, preparation, properties, 562.

$C_{18}H_{22}O_5N_2S_4$. Quaternary salt of dimethinemerocyanin, preparation, properties, absorption maximum, decomposition, 1276.

$C_{18}H_{30}ON_6Cl$. p-Acetaminobenzyl-$N^4$-octylaminoguanyl hydrochloride, synthesis, 159.

18. V

$C_{18}H_{14}N_2S_3F_3I$. 3-Methyl-6-trifluoromethylmercapto-benzthiazole-(2)-3-methylbenzthiazole(2')-methinecyanine iodide, preparation, 2277.

$C_{18}H_{17}O_3N_3S_2Se$. 3-Diacetylamino-5-(3'-ethylbenzo-selenazolinylidene-2'-ethylidene)-thiazolidine-thion-(2)-one-(4), preparation, 772.

$C_{18}H_{19}N_2O_3SI$. 6-(N-methyl-p-toluenesulfonamido)-quinoline methyl iodide, preparation, 2061.

Group $C_{19}$

19, I

$C_{19}H_{14}$. 6-Methyl-3,4-benzphenanthrene, preparation, properties, 1469.

$C_{19}H_{16}$. Triphenylmethane, absorption spectra, 884.

$C_{19}H_{18}$. 6-Methyl-1,2,3,4-tetrahydronaphthacene, preparation, solubility, 1929.

19, II

$C_{19}H_{14}O_2$. 2-Hydroxyfuchsone, preparation, properties, 1481.

$C_{19}H_{16}O_2$. 1,2,3,4-Tetrahydronaphthacene-6-carboxylic acid, preparation, 1929.

$C_{19}H_{16}O_3$. 2,4-Dihydroxytriphenylcarbinol, preparation, properties, acetylation, 1484.

$C_{19}H_{17}Br$. 6-Methyl-11-bromo-1,2,3,4-tetrahydronaphthacene, preparation, properties, 1928.

$C_{19}H_{18}O_2$. 1,2,3,4,6,11-Hexahydronaphthacene-6-carboxylic acid, preparation, 206.

$C_{19}H_{18}O_{10}$. Oxidation product of methylated corydine, 5,6,5',6'-tetramethoxydiphenyl-2,3,3'-tricarboxylic acid, formation, properties, 2295.

$C_{19}H_{20}O_2$. Methylene-bis-propionphenone, reaction with allylmagnesium iodide, 1849.

$C_{19}H_{22}O_4$. β-(2-Naphthyl)-ethyl malonate, preparation, properties, reaction with sodium alcoholate and 1,3-dichlorobutene-2, 1468.

$C_{19}H_{26}O_2$. 1) 3,8-Dimethyl-$\Delta^{2,5}$-decahydro-4,5,6,7-dibenzindan-2-ol-1-one, formation, properties, derivatives, reduction, 283; -$\Delta^5$-dodecahydro-4,5,6,7-dibenzindan-1,2 dione, preparation, properties, reduction, 283.

2) Diketone from condensation of dicyclohexenyl with 1,3-dimethyl-$\Delta'$-cyclopentene-4,5-dione, preparation, condensation with o-phenylenediamine, isomerization to keto-enol, hydrogenation, 290.

3) Keto-enol, preparation, properties, acetylation, hydrogenation, 291.

$C_{19}H_{26}O_3$. Dicarboxylic acid anhydride, preparation, 295.

$C_{19}H_{28}O$. 1) 12-b-methyl-$\Delta^{8a}$-hexadecahydrotriphenylen-1-one, preparation, properties, dinitrophenylhydrazone, 289.

2) 3,8-Dimethyl-$\Delta^5$-dodecahydro-4,5,6,7-dibenzindan-1-one, α and β isomers, preparation, properties, dinitrophenylhydrazone, 290.

$C_{19}H_{28}O_2$. 1) Hydrogenation product of diketone, (ketol), preparation, properties, dinitrophenylhydrazone, 293.

2) Ketol, preparation, properties, dinitrophenylhydrazone, acetylation, oxidation, 293.

$C_{19}H_{28}O_4$. Ketol, preparation, 294.

$C_{19}H_{30}O_2$. Glycol (hydrogenation product of keto-enol), preparation, properties, 292.

$C_{19}H_{32}O_8$. Ester of heptane-1,1,7,7-tetracarboxylic acid, preparation, properties, 1998.

19, III

$C_{19}H_{12}O_8N_4$. Picrate of 1-hydroxyphenanthridine, formation, 2057.

$C_{19}H_{19}O_2Br$. 11-Bromo-1,2,3,4-tetrahydronaphthacene-6-carboxylic acid, preparation, solubility, 1928.

$C_{19}H_{16}O_8N_4$. Picrate of 2-amino-3-methoxybiphenyl, formation, 2056.

$C_{19}H_{17}O_3P$. Triphenylmethylphosphinic acid, preparation, 1525.

$C_{19}H_{19}O_4Cl$. [β-(2-Naphthyl)-ethyl-(3-chloro)-crotyl]-malonic acid, preparation, 1468.

$C_{19}H_{20}O_3N_2$. Anilide of N-benzoylamino-β-methyl-β-ethylacrylic acid, preparation, 1924.

$C_{19}H_{20}O_3N_2$. 8-(p-Acetaminophenoxy)-N-acetyltetrahydroquinoline, preparation, properties, 1265.

$C_{19}H_{20}O_7N_2$. [Bis-(4-carbethoxy-3-hydroxyphenyl)]-urea, preparation, solubility, 2071.

$C_{19}H_{20}O_8N_2$. Dihydrazone of β-ketol, 511; 512.

$C_{19}H_{22}O_6N_2$. [Bis-(4-carbethoxy-3-hydroxyphenyl)]-methane, preparation, solubility, 2071.

$C_{19}H_{29}O_4N$. Acetylgalantamine, preparation, 1942.

$C_{19}H_{34}O_{10}N_4$. Picrate of turneforcine, formation, conversion to free base, 1509.

$C_{19}H_{27}ON$. 8-Decoxyquinoline, preparation, properties, picrate, 1266.

$C_{19}H_{27}O_2N$. 8-Decoxyquinoline N-oxide, preparation, properties, 1271.

$C_{19}H_{28}OS$. 1) Sulfur analog of steroid with thiopyran ring, 1035.

2) Condensation product of diene with 1,3-dimethyl-$\Delta^1$-cyclopenten-5-one, preparation, properties, hydrogenation, 1036.

$C_{19}H_{30}OS$. 1) Hydrogenation product of steroid ketone, preparation, properties, formation of 2,4-dinitrophenylhydrazone, 1036.

2) Oxidation product of steroid ketone, formation, properties, preparation of 2,4-dinitrophenylhydrazone, 1037.

$C_{19}H_{30}O_3S$. Sulfone, oxidation product of $C_{19}H_{30}OS$, preparation, 2,4-dinitrophenylhydrazone, 1037.

$C_{19}H_{35}O_7P$. d-Diethylphosphon-β-phenylglutaric acid diethyl ester, preparation, properties, 2185.

$C_{19}H_{31}O_3P$. Ethyl ester of β-phenyl-β-dibutylphosphonopropionic acid, preparation, properties, 1191; of β-phenyl-β-diisobutylphosphonopropionic acid, preparation, properties, 1191.

$C_{19}H_{38}O_2Hg$. Product of reaction of dimethylmercury and stearic acid, 1183.

19. IV

$C_{19}H_{16}O_2N_2S_2$. Decomposition product of 3-phenyl-5-(3'-ethylbenzothiazolinyliden-2'-ethylidene)-thiazolidinethion-(2)-one-(4), formation, properties, absorption maximum, 1276.

$C_{19}H_{19}N_2S_2I$. Monomethylthiacyanin, preparation, 371.

$C_{19}H_{20}ON_2S_2$. 3-Ethyl-5-(1'-ethyl-3',3'-dimethylindolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), synthesis, properties, 215.

19. V

$C_{19}H_{17}ONS_2F_3$. 2-(3'-methyl-6'-trifluoromethylmercaptobenzthiazolinylidene)-3-oxo-2,3-dihydrothionaphthene, preparation, absorption maximum, 2276.

$C_{19}H_{14}ON_2S_2F_3$. 4-(3-Methyl-6'-trifluoromethylmercaptobenzthiazolinylidene-(2'))-(1-phenyl-3-methylpyrazolone-5), preparation, 2276.

$C_{19}H_{18}N_2IF_3S_2$. Methiodide of 2-p-dimethylaminostyryl-6-trifluoromethyl-mercapto-benzthiazole, preparation, properties, 2276.

$C_{19}H_{21}O_3N_2SI$. Methyl iodide salt of 6-methoxy-8-(N-methyl-p-toluenesulfonamido-quinoline, preparation, 2062.

Group $C_{20}$

20. I

$C_{20}H_{12}$. 3,4-Benzopyrene, preparation, 1733.

$C_{20}H_{14}$. Dinaphthyl, preparation, 833.

$C_{20}H_{18}$. 3,4,3',4'-Tetrahydro-1,1'-binaphthyl, preparation, condensation with maleic anhydride, 1,3-dimethyl-$\Delta'$-cyclopenten-5-one, 1,3-dimethyl-$\Delta'$-cyclopentene-4,5-dione, 296.

$C_{20}H_{20}$. 6,11-Dimethyl-1,2,3,4-tetrahydronaphthacene, preparation, solubility, 1929.

$C_{20}H_{22}$. 6,11-Dimethyl-1,2,3,4,6,11-hexahydronaphthacene, preparation, properties, 207; oxidation, 207.

$C_{20}H_{28}$. 3,4,3',4'-Tetrahydro-1,1'-dinaphthyl, preparation, condensation with diene compounds, 286.

$C_{20}H_{30}$. 1) Alkyldipentene, preparation, properties, 1634.

2) Product of reaction of myrtenyl magnesium halide and acetaldehyde, formation, properties, 1631.

$C_{20}H_{32}$. Tetracyclopentane, preparation, properties, 1585.

20. II

$C_{20}H_{14}Hg$. Dinaphthylmercury, photoreactions, 2119; ($\alpha$ and $\beta$), reaction with amides of fatty acids, 701; reaction with thiosalicylic acid, 706.

$C_{20}H_{16}O$. Product of reaction of o-magnesiumbromotoluene and phenalone-9, formation, pyrolysis, 1739.

$C_{20}H_{18}O_4$. 1,2,3,4,6,11-Hexahydronaphthacene-6,11-dicarboxylic acid, preparation, 206.

$C_{20}H_{19}O_5$. Product of reaction of des-N-methylthalicmine methiodide and KOH, formation, properties, 1101.

$C_{20}H_{20}O_2$. Benzoyl derivative of diene phenol, preparation, 679.

$C_{20}H_{20}O_3$. Product of reaction of fenchenol and phthalic anhydride, formation, 1867.

$C_{20}H_{20}O_4$. 2,3,5,6-Tetramethoxy-8-vinylphenanthrene, preparation, oxidation, 1099.

$C_{20}H_{22}N_2$. Dimer of dihydrolepidine, preparation, formation of picrate, 1302; of dihydrolepidine, preparation, 2129.

$C_{20}H_{22}O_2$. 1) Pinacol from reduction of $\alpha$-tetralone, preparation, properties, dehydration, 295.

2) Di-p-tolyl-2,5-hexyne-3-diol-2,5; formation, analysis, 1443.

3) Full ethyl ether of diphenylbutyne-diol, preparation, properties, bromination, hydrogenation, 1874.

$C_{20}H_{24}O_2$. Product of hydrogenation of full ethylether of diphenylbutynediol, preparation, properties, 1877.

$C_{20}H_{24}O_4$. Product of reaction of methyl lactolide of methylbenzoylcarbinol with oxalic acid, formation of semicarbazone, 1203; of methyl lactolide of methylbenzoylcarbinol with dichloroacetic acid, preparation, properties, 1203.

$C_{20}H_{26}O_2$. Product of hydrogenation of full ethyl ether of diphenylbutynediol, preparation, properties, (1,4-diphenyl-1,4-diethoxybutane), 1877.

$C_{20}H_{22}S$. $\alpha$-Naphthyl decyl sulfide, constants, 163.

$C_{20}H_{36}O_4$. Condensation product of isobutyraldehyde and dimedon, formation, 1439.

$C_{20}H_{32}O_2$. Arachidonic acid from oil of perca shrenki, 1295.

$C_{20}H_{34}O_8$. Ester of octane-1,1,8,8-tetracarboxylic acid, preparation, properties, saponification, 872.

$C_{20}H_{34}O_{11}$. Octamethylmannosido-2-mannose, preparation, reaction with HCl, 306.

$C_{20}H_{38}O_4$. Dicapryl peroxide, preparation, properties, 2181.

$C_{20}H_{38}O_{11}$. Octamethylglucosido-2-galactose, synthesis, properties, 171.

$C_{20}H_{40}O_2$. Arachidic acid, formation, 2042.

20. III

$C_{20}H_{12}N_2Br_2$. 1,1'-Dibromo-2,2'-azonaphthalene, preparation, 1231; 4,4'-dibromo-1,1'-azonaphthalene, preparation, 1232; 5,5'-dibromo-1,1'-azonaphthalene, preparation, 1232.

$C_{20}H_{12}O_4N_2$. 1,1'-Dinitro-2,2'-dinaphthyl, preparation, 1232; 8,8'-dinitro-1,1'-dinaphthyl, 1232.

$C_{20}H_{12}O_4N_4$. 4,4'-Dinitro-1,1'-azonaphthalene, preparation, 1232; 5,5'-dinitro-1,1'-azonaphthalene, preparation, 1232.

$C_{20}H_{14}O_2N_2$. 5,5'-Dihydroxy-1,1'-azonaphthalene, preparation, 1233; 7,7'-dihydroxy-1,1'-azonaphthalene, preparation, 1233.

$C_{20}H_{14}O_8N_4$. Picrate of 1-methoxyphenanthridine, formation, 2057.

$C_{20}H_{17}O_5N_5$. Product of reaction of 2-hydroxy-4-methyl-5-carbethoxy-6-phenyl-dihydropyrimidine and p-nitrodiazobenzene, formation, 1727.

$C_{20}H_{16}O_7N_4$. p-Nitrophenylhydrazone of p-nitrobenzyl ester of diketocarboxylic acid, preparation, 737.

$C_{20}H_{19}O_3N_5$. Product of reaction of 2-hydroxy-4-methyl-5-carbethoxy-6-phenyldihydropyrimidine and p-nitrodiazobenzene, formation, solubility, 1726.

$C_{20}H_{29}N_2O$. Dihydrolepidine oxide, preparation, formation of picrate, 2126.

$C_{20}H_{21}O_4N$. Papaverine, oxidation by atmospheric oxygen, 945.

$C_{20}H_{21}O_5N$. Papaverinol, formation, 946.

$C_{20}H_{22}O_2Br_2$. Bromination product of ethyl ether of diphenylbutynediol, preparation, properties, 1876.

$C_{20}H_{22}O_{17}N_{16}$. N-glycyl-glycyldimethylaminoacetamidine, preparation, properties, 2085.

$C_{20}H_{25}ON$. p-(4-Methylcyclohexyl)aniline, formation, acetanilide, benzanilide of, 1592.

$C_{20}H_{25}O_2N$. Benzoate of 1,2-dimethyl-4-phenyl-4-piperidol, preparation, properties, 1713.

$C_{20}H_{25}O_4N$. Thalicmidine, structure, 1095.

$C_{20}H_{24}O_4N_4$. 2,4-Dinitrophenylhydrazone of cis-$\Delta^{12a}$-dodecahydrophenanthrene-4-one, preparation, properties, 277; of trans-$\Delta^{12a}$-dodecahydrophenanthrene-4-one, preparation, 279.

$C_{20}H_{26}O_4N_4$. 2,4-Dinitrophenylhydrazone of cis-perhydrophenanthren-4-one, preparation, 277; of trans-perhydrophenanthren-4-one, preparation, 280.

$C_{20}H_{26}O_8N_4$. Picrate of indicamin, formation, 2298.

$C_{20}H_{29}ON$. 8-Undecoxyquinoline, preparation, properties, picrate, 1266.

$C_{20}H_{29}O_2N$. 8-Undecoxyquinoline N-oxide, preparation, properties, 1271.

$C_{20}H_{32}O_2Br_2$. Bromination product of arachidonic acid, 1298.

20. IV

$C_{20}H_{14}ONCl$. Anilide of diphenylchloroacetic acid, preparation, 760.

$C_{20}H_{14}O_2N_2S_2$. 3-Phenyl-5-(3'-ethyl-benzothiazolinyliden-2'-ethylidene)-thiazolidone-2,4; formation, properties, absorption maximum, 1276.

$C_{20}H_{14}O_2N_2S_2$. 3-Ethyl-5-(3'-ethyl-4',5'-benzobenzooxazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4). Synthesis, properties, 216.

$C_{20}H_{18}ON_2S_3$. 3-Ethyl-5-(3'-ethyl-6',7'-benzobenzothiazolinylidine-2'-ethylidene)-thiazolidinethion-(2)-one-(4). Synthesis, properties, 215; 3-Ethyl-5-(3'-ethyl-4',5'-benzobenzothiazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4). Synthesis, properties, 215.

$C_{20}H_{19}O_3N_3S_2$. 3-Diacetylamino-5-(1'ethyldihydroquinolylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), preparation, 772; 3--5-(1'-ethyl-dihydroquinolylidene-4'-ethylidene)-thiazolidinethion-(2)-one(4), preparation, 772.

$C_{20}H_{19}O_5N_3S$. Pyridine compound of 1-S-(2-phenyl-5-oxazolonylmethylen-4-)-N-acetylcysteine, preparation, properties, action of HCl, 2254.

$C_{20}H_{21}N_2S_2I$. Monomethenylthiacyanin, preparation, 371.

$C_{20}H_{21}O_6N_2S$. Product of reaction of 2-hydroxy-4-methyl-5-carbethoxydihydropyrimidine and p-sulfamidodiazobenzene, formation, 1727; of 2-hydroxy-4-methyl-5-carbethoxy-6-phenyl-dihydropyrimidine and p-sulfamidodiazobenzene formation, 1727.

$C_{20}H_{22}N_2S_3I_2$. Bis[benzothiazolyl-(2)-methyl] sulfide diethiodide, preparation, 777.

$C_{20}H_{22}S_4N_2I_2$. Bis-[benzothiazolyl-(2)-methyl] disulfide diethiodide, preparation, 777.

$C_{20}H_{22}O_4N_2S$. N-[2'-phenyl-5(4')oxazolonemethylene-4')-2-benzylthiazolidine-4-carboxylic acid, preparation, properties, 1910.

$C_{20}H_{24}N_2S_2I$. Ethiodide of 2-methyl-6-(N-benzyl-S-ethylisothiocarbamido-N')-benzothiazole, preparation, 379.

$C_{20}H_{22}O_4N_2S_2$. Di-(butanesulfo)-benzidide, preparation, 1472.

$C_{20}H_{28}O_8N_2Ca$. Ca salt of product of coupling succinic acid with $\epsilon$-caprolactam, 1313.

20. V.

$C_{20}H_{14}ONS_2F_3$. 2-(3-Ethyl-5-trifluoromethylbenzothiazolenilidene-2'-ethylidene)-3-oxo-2,3-dihydrothionaphthene, preparation, absorption maximum, 2272.

$C_{20}H_{18}N_2S_2F_3I$. [3-Ethyl-5-trifluoromethylbenzothiazole-(2)][3-ethylbenzothiazole(2)]methinecyanine iodide, preparation, absorption maximum, 2271.

$C_{20}H_{20}N_2SF_3I$. 2-p-Dimethylaminostyryl-5-trifluoromethylbenzothiazole ethiodide, preparation, absorption maximum, 2272.

$C_{20}H_{21}O_4N_2S_2Cl$. Monomethenylthiacyanin, preparation, 371.

$C_{20}H_{22}ON_2S_2I_2$. Bis-[benzothiazolyl-(2)-methyl]oxide diethiodide, preparation, 777.

Group $C_{21}$

21. I

$C_{21}H_{26}$. Bornyl-$\alpha$-naphthyl methane, preparation 1414.

21. II

$C_{21}H_{14}N_6$. Derivative of 1,2,4,5-diimidazolobenzene, 1068.

$C_{21}H_{20}O_3$. p-Phenylphenacyl ester of methylethylacetic acid, preparation, properties, 252.

$C_{21}H_{21}N$. Dimethyldiaminotriphenylmethane, absorption spectrum, 884.

$C_{21}H_{24}O$. Bornyl-$\alpha$-naphthyl ketone, preparation formation of phenylhydrazone, reduction, 1414.

$C_{21}H_{28}O_3$. Acetylation product of keto-enol, preparation, saponification, 292.

$C_{21}H_{34}O$. Dimyrtenyl ketone, preparation, 1631.

$C_{21}H_{36}O_3$. Acetylation product of ketol, preparation, 294; product of ketol, preparation, 295.

$C_{21}H_{34}O_{10}$. Pentaethyl ester of 1,2,4,4,6-hexanepentacarboxylic acid, preparation, hydrolysis with KOH, 1852; of 1,3,4,4,6-hexanetetracarboxylic acid, preparation, properties, saponification, 1852.

$C_{21}H_{38}O_4$. Acetylated ricinoleic acid methyl ester, preparation, properties, oxidation, 2035.

$C_{21}H_{38}O_5$. Oxide of acetylated methyl ester of ricinoleic acid, preparation, properties, saponification, 2035.

21. III.

$C_{21}H_{14}N_2S_2$. Bisbenzothiazolylphenylmethane, preparation, properties, UV absorption spectra, 365.

$C_{21}H_{14}O_8N_4$. Picrate of 8-phenoxyquinoline, formation, 1264.

$C_{21}H_{15}O_8N_5$. Picrate of 8-quinoline-p-aminophenyl ester, 1264.

$C_{21}H_{17}ON$. 1) 3,3-Diphenyl-5-methyloxindole, preparation, 759; 4,4-Diphenyl-2-oxotetrahydroquinoline, (4,4-diphenylhydrocarbostyril), preparation, 1238.

2) β,β-Diphenylacrylanilide, preparation, 1237.

$C_{21}H_{19}O_2N$. 1) p-Toluidide of benzilic acid, condensation, 759.

2) Anilide of β,β-diphenyl-β-hydroxypropionic acid, preparation, properties, 1033.

$C_{21}H_{23}O_5N$. Thalicmine, structure, 1095.

$C_{21}H_{24}O_8N_4$. Picrate of 1,2-dimethyl-4-phenyl-4-piperidol, formation, 1712.

$C_{21}H_{22}O_8N_4$. Cyclohexenyl-β-(N-piperidyl)-propyl ketone, preparation, properties, 1840.

$C_{21}H_{30}O_{12}N_4$. Macrotomine picrate, formation, 1500.

$C_{21}H_{31}ON$. 8-Dodecoxyquinoline, preparation, properties, picrate, 1266.

$C_{21}H_{24}O_2Hg$. Orthotolylmercury myristate, 114.

21. IV

$C_{21}H_{17}O_4NS$. 1) Schiff base of p-aminophenylphenacyl sulfone and salicylaldehyde, preparation, properties, 342.

2) 2-p-Aminophenylsulfonyl-2-(benzoyl)-1-o-hydroxyphenylethylene, preparation, properties, 343.

$C_{21}H_{18}O_4N_2S$. 1) 2-p-Aminophenylsulfonyl-2-(p'-aminobenzoyl)-1-o-hydroxyphenylethylene, preparation, properties, 344.

2) N-(2'-Phenyl-5(4)'-oxazolonemethylene-4')-2-benzylthiazolidine-4-carboxylic acid, preparation, properties, derivatives, 1909.

$C_{21}H_{16}O_6SHg_2$. Orthoditolylmercury sulfosalicylate, 116.

$C_{21}H_{22}ON_2S$. Piperidide of α-thiobenzoylaminocinnamic acid, preparation, 323.

$C_{21}H_{23}N_2S_2I$. Monomethenylthiacyanin, preparation, 371.

$C_{21}H_{22}O_3N_2S_2$. 3-Diacetylamino-5-(1'-ethyl-3',3''-dimethylindolenylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), preparation, 772.

$C_{21}H_{24}ON_2S$. Piperidide of α-thiobenzoylaminohydrocinnamic acid, preparation, 323.

$C_{21}H_{22}O_3N_2S_2$. 1) 2-Methyl-6-(N-allylthiocarbamido-N')-benzothiazole ethyl-p-tolu-sulfonate, preparation, properties, absorption maximum, formation of ethyl perchlorate, ethiodide, 377.

2) p-Toluenesulfonate of 2-methyl-6-(N-allyl-S-ethylthiocarbamido-N')-benzothiazole, preparation, properties, 378.

21. V

$C_{21}H_{15}N_2S_4F_6I$. Bis-[3-methyl-6-trifluoromethylmercaptobenzthiazole-(2)]-trimethine cyanine iodide, preparation, absorption maximum, 2276.

$C_{21}H_{19}N_2SF_2I$. Bis-[3-ethyl-5-fluorobenzthiazole-(2)] trimethinecyanine iodide, preparation, absorption maximum, 2272.

$C_{21}H_{19}ON_2S_2I$. 3,3'-Diethyl-8,10-epoxy-thiacarbocyanin iodide, preparation, 778.

Group $C_{22}$

22. II

$C_{22}H_{14}O_3$. 2,3-Diphenyl-1,4-naphthoquinone oxide, preparation, properties, 506.

$C_{22}H_{16}O$. 2,3,5-Triphenylfuran, preparation, properties, 881.

$C_{22}H_{18}O$. Product of reaction of magnesiumbromomesitylene with phenalone-9, formation, pyrolysis, 1740.

$C_{22}H_{18}O_2$. Diphenyl-phenylacetylenylethylene glycol, (1,2,4-triphenyl-butyn-3-diol-1,2), transformations with mercury salts, 879.

$C_{22}H_{22}O_2$. Di-p-tolyl-2,7-octadiyne-3,5-diol-2,7, preparation, analysis, catalytic hydrogenation, 1443.

$C_{22}H_{26}O$. Diphenylmyrtenylcarbinol, preparation, properties, 1631.

$C_{22}H_{26}O_4$. Reduction product of 6-methoxytetralone-1, formation, action of acetic acid, 297.

$C_{22}H_{30}O_2$. Hydrogenation product of ditolyloctadiyne-diol, formation, 1444.

$C_{22}H_{34}O_2$. Clupadonic acid, from the liver oil of Perca shrenki, 1298.

$C_{22}H_{42}O_2$. $\Delta^{2,3}$-docosenoic acid, preparation, properties, oxidative cleavage, formation of silver and lead salts, ethyl ester, 2041.

$C_{22}H_{44}O_3$. α-Hydroxybehenic acid, preparation, properties, 2043.

22. III

$C_{22}H_{16}O_9N_4$. Picrate of 5-Phenoxy-8-methoxyquinoline, formation, 1266.

$C_{22}H_{18}O_4Hg_2$. Orthoditolylmercury phthalate, 116.

$C_{22}H_{19}ON$. 1) 4,4-Diphenyl-2-oxo-6-methyltetrahydroquinoline, preparation (4,4-Diphenyl-6-methylhydrocarbostyril), 1238; 4,4-diphenyl-2-oxo-8-methyltetrahydroquinoline (4,4-diphenyl-8-methylhydrocarbostyril), preparation, 1239.

2) Lactam of o-(β-aminoethyl)-triphenylacetic acid (1,1-diphenyl-2-oxohomotetrahydroisoquinoline-symmetrical, preparation, 763.

3) 1-Methyl-4,4-diphenyl-3-oxo-1,2,3,4-tetrahydroisoquinoline, preparation, properties, 763.

4) β,β-Diphenylacrylo-o- and p-toluidides, preparation, 1238.

$C_{22}H_{19}O_2N$. β,β-Diphenylacrylo-p-aniside, preparation, 1238.

$C_{22}H_{19}O_3N$. 1) 3,3-Bis-(4-methoxyphenyl)-oxindole (p-dianisolisatin), preparation, properties, 362.

2) o-Dianisolisatin (3,3-bis-(2-methoxyphenyl)-oxindole), preparation, properties, 239.

$C_{22}H_{21}O_2N$. 1) α-Phenylethylamide of benzilic acid, preparation, condensation, 762; β- — of benzilic acid, preparation, properties, formation of lactam, 762.

2) o-Toluidide of β,β-diphenyl-β-hydroxypropionic acid, preparation, properties, 1034; p- — of β,β-diphenyl-β-hydroxypropionic acid, preparation, properties, 1034.

$C_{22}H_{21}O_3N$. Anilide of β,β-diphenyl-β-hydroxypropionic acid, preparation, properties, 1034.

$C_{22}H_{21}O_4N$. 1) 2,2'-Dimethoxybenzilanilide, preparation, properties, 238.

2) Anilide of 4,4'-dimethoxybenzilic acid, preparation, properties, 361.

$C_{22}H_{21}O_{14}N_9$. N-Phenyl-dimethylaminoacetamidine dipicrate, preparation, solubility, 2088.

$C_{22}H_{29}O_4N$. Diethyl-imino-bis-[methylene-(phenyl)-acetate], preparation, properties, 1660.

$C_{22}H_{25}NO_5$. Des-N-methylthalicmine, preparation, properties, formation of sulfate, methiodide, reaction with KOH, 1100.

$C_{22}H_{27}NO_4$. Des-o-methyl-N-methylthalicmidine, preparation, formation of methiodide, 1099.

$C_{22}H_{29}O_{14}N_3$. Dipicrate of 1,2,3,6-tetramethyl-methylaminopiperidine, formation, 688.

$C_{22}H_{41}O_2Ag$. Silver salt of $\Delta^{2,3}$-docosenoic acid, formation, 2042.

$C_{22}H_{43}O_2Br$. α-Bromobehenic acid, preparation, properties, solubility, action of alcoholic KOH, 2041.

22. IV

$C_{22}H_{18}O_3NBr$. 3,3-Bis-(4-methoxyphenyl)-6-bromoxindole, preparation, properties, 362.

$C_{22}H_{19}O_3N_3S_2$. 3-Diacetylamino-5(3'-ethyl-6',7'-benzobenzothiazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), preparation, 772

$C_{22}H_{19}O_3N_3S_3$. 3-Diacetylamino-5-(3'-ethyl-4',5',-benzobenzothiazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), preparation, 772.

$C_{22}H_{19}O_4N_3S_2$. 3-Diacetylamino-5-(3'-ethyl-4',5'-benzobenzooxazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), preparation, 772.

$C_{22}H_{28}O_4NBr$. m-Bromanilide of 4,4'-dimethoxybenzilic acid, preparation, properties, 360.

$C_{22}H_{26}O_6N_2S_2$. Aniline salt of 1-naphthol-4-sulfanilid-8-sulfonic acid, preparation, properties, 1669.

$C_{22}H_{22}O_3N_2S_3$. 3-Diacetylamino-5-(3'-ethyl-6',7'-tetramethylenebenzothiazolinylidene-2'-ethylidene)-thiazolidinethion-(2)-one-(4), preparation, 772.

$C_{22}H_{34}O_8N_4S_2$. 1,4-Dibenzylsulfoglycyl-2,5-diketopiperazine, preparation, properties, structure, absorption maximum, 2212.

22. V

$C_{22}H_{21}N_2S_2F_3I$. Bis[3-ethyl-5-fluoromethylbenzthiazole-(2)]-9-methyltrimethinecyanine iodide, preparation, absorption maximum, 2272.

Group $C_{23}$

23. I

$C_{23}H_{22}$. 1,2,4-Triphenylcyclopentane, formation, 1431.

23. II

$C_{23}H_{22}O_5$. 2,4-Diacetoxytriphenylcarbinol, preparation, properties, action of HCl, saponification, 1485.

$C_{23}H_{26}N_2$. Leucomalachite green, absorption spectrum, 884.

$C_{23}H_{26}O_6$. 4,6-Dimethyl-3,7-diphenyl-3,7-dihydroxynonane dicarboxylic acid, preparation, analysis, formation of the Ag salt, 1850.

23. III

$C_{23}H_{21}O_2N$. β,β-Diphenylacrylo-p-phenetidide, preparation, 1238.

$C_{23}H_{21}O_3N$. 3,3-Bis-(2-methoxyphenyl)-5-methyloxindole, preparation, properties, 240.

$C_{23}H_{21}O_4N$. 3,3-Bis-(2-methoxyphenyl)-7-methoxyindole, preparation, properties, 240; 3,3-Bis-(4-methoxyphenyl)-7-methoxyoxindole, preparation, properties, 362.

$C_{23}H_{27}O_{14}N_3$. N-benzyldimethylaminoacetamidine dipicrate, preparation, solubility, 2087.

$C_{23}H_{22}O_3N$. 1) o-Anisidide of dibenzylglycolic acid, preparation, 762.

2) o-Phenetidide of β,β-diphenyl-β-hydroxypropionic acid, preparation, properties, 1034.

$C_{23}H_{23}O_4N$. 2,2'-Dimethoxybenzil-p-toluidide, preparation, properties, 239.

$C_{23}H_{23}O_5N$. o-Anisidide of 4,4'-dimethoxybenzilic acid, preparation, properties, 361.

$C_{23}H_{25}ON_2$. Carbinol base of malachite green, absorption spectrum, 886.

$C_{23}H_{27}O_4Cl$. [β-(2-Naphthyl)-ethyl-(3-chloro)-crotyl]-malonate, preparation, properties, reaction with alcoholic NaOH, 1468.

$C_{23}H_{27}O_{13}N_{11}$. N-dl-Alanylglycylglycyl-dimethylaminoacetamidine dipicrate, preparation, 2088.

$C_{23}H_{32}O_2Hg$. Orthotolylmercury palmitate, synthesis, 114.

23. IV

$C_{23}H_{17}O_6N_2S$. S,N-Di-(2-phenyl-5-oxazolonyl methylen-4)-cysteine, preparation, solubility, 2255.

$C_{23}H_{19}O_5NS$. 2-p-acetylaminophenylsulfonyl-2-(benzoyl)-1-o-hydroxyphenylethylene, preparation, properties, 342.

$C_{23}H_{22}O_3NCl$. m-Benzoylhydroxy-ω-benzylmethylaminoacetophenone hydrochloride, preparation, properties, 582.

$C_{23}H_{20}O_2N_2S$. Distillation product of product of reaction of thioacetic acid and 2-phenyl-4-isopropyliden-5-oxazolone, 323.

$C_{23}H_{30}O_4N_2S$. p-Acetylaminophenyl-δ-diethylaminobutyl-1-(benzoyl) sulfone, preparation, properties, 342.

23. V

$C_{23}H_{17}O_5NSBr_2$. 2-p-Acetylaminophenylsulfonyl-2-(benzoyl)-1-o-hydroxy-m,m-dibromophenylethylene, preparation, properties, 343.

$C_{25}H_{19}N_2S_2F_3I$. Bis[3-ethyl-5-trifluoromethylbenzthiazole-(2)]trimethine cyanine iodide, preparation, absorption maximum, 2271.

$C_{25}H_{23}N_2S_2F_2I$. Bis-[3-Ethyl-5-fluorobenzthiazole-(2)]-9-ethyltrimethinecyanine iodide, preparation, absorption maximum, 2272.

Group $C_{24}$

24. I

$C_{24}H_{14}$. Pyrolysis product formed from product of reaction of α-magnesiumbromo-β-methylnaphthalene and phenalone-9, 1740.

$C_{24}H_{24}$. Triphenylcyclohexane, formation, 1431.

24. II

$C_{24}H_{20}O$. 1) 2-Methyl-1'-methylphenylmethylene-(2',3':2,3-indeno)cumaran, preparation, properties, absorption maximum, action of HI, oxidation, 1884.

2) 1-Methylphenylmethylene-2-(p-hydroxyphenyl)-3-methylindene, preparation, properties, absorption maximum, oxidation, 1885; — -2-phenoxy-3-methylindene, preparation, properties, absorption maximum, 1886.

$C_{24}H_{20}O_3$. Condensation product of 3,4,3',4'-tetrahydro-1,1'-binaphthyl and maleic anhydride, 296.

$C_{24}H_{20}Pb$. Tetraphenyl lead, reaction with thiosalicylic acid, 708.

$C_{24}H_{20}Sn$. Tetraphenyltin, reaction with thiosalicylic acid, 708.

$C_{24}H_{22}O_2$. 1) 2-Methylphenyl-4-methylphenylmethylene-7-hydroxy-2,3-dihydrobenzopyran, preparation, properties, oxidation, absorption maximum, 1885.

2) 2,5-Dimethyl-2,5-diphenyl-3-phenoxydihydrofuran-2,5, preparation, properties, oxidation, 1886.

$C_{24}H_{22}Si$. α-Naphthyl-p-ditolylsilane, preparation, properties, 1169.

$C_{24}H_{26}N_2$. α,α-Di-(p-dimethylaminophenyl)-β-phenylethylene, preparation, analysis, oxidation, bromination, 1462.

$C_{25}H_{34}O_{17}$. Acetylated calcium salt of glucosido-2-galactonic acid, synthesis, 171.

$C_{24}H_{36}O_{12}$. Hexaethyl ester of 1,2,2,5,5,6-hexanehexacarboxylic acid, preparation, saponification and decarboxylation, 1853.

$C_{22}H_{42}O_2$. Ethyl ester of $\Delta^{2,3}$-docosenoic acid, preparation, 2043.

$C_{24}H_{48}O_3$. α-Ethoxybehenic acid, formation, 2043.

24. III.

$C_{24}H_{15}N_3O_7$. Picrate of 3,4-benzophenanthrene, formation, 1469.

$C_{24}H_{15}N_3O_8$. Picrate of 6-hydroxy-3,4-benzophenanthrene, preparation, properties, 1469.

$C_{24}H_{16}O_8N_4$. 1,4-N,N-diphthalylglycyl-2,5-diketopiperazine, preparation, properties, condensation, reactions, 2212.

$C_{24}H_{20}N_4O_4$. 2,4-Dinitrophenylhydrazone of 6-keto-6,7,8,8a,9,10-hexahydro-3,4-benzophenanthrene, preparation, 1469.

$C_{24}H_{23}O_4N$. 3,3-Bis-(2-methoxyphenyl)-5-ethoxyindole, preparation, properties, 240; — -(4-methoxyphenyl)-5-ethoxyindole, preparation, properties, 362.

$C_{24}H_{23}O_5N$. 3,3-Bis-(2,4-dimethoxyphenyl)-oxindole, preparation, 1031.

$C_{24}H_{25}N_2Br$. Bromide of α,α-di-(p-dimethylaminophenyl)-β-phenylethylene, preparation, oxidation, 1462.

$C_{24}H_{25}O_5N$. 1) 2,2'-Dimethoxybenzil-p-phenetidide, preparation, properties, 239.

2) p-Phenetidide of 4,4'-dimethoxybenzilic acid, preparation, properties, 361.

$C_{24}H_{25}O_6N$. Anilide of 2,2',4,4'-tetramethoxydiphenylglycolic acid, preparation, conversion to 3,3-bis-(2,4-dimethoxyphenyl) oxindole, 1031.

$C_{24}H_{26}O_2S$. Sulfide of 1,1 Phenylcyclopentane thiocarboxylic acid, preparation, solubility, 2249.

$C_{24}H_{26}O_2S_2$. Disulfide of 1,1-phenylcyclopentane thiocarboxylic acid, preparation, solubility, 2249.

$C_{24}H_{27}ON_2$. α,α-Di-(p-dimethylaminophenyl)-benzyl carbinol, preparation, analysis, 1462.

$C_{24}H_{30}O_4N_4$. Dinitrophenylhydrazone of $\Delta^{8a}$-hexadecahydrophenanthren-1-one, preparation, 288.

$C_{24}H_{30}O_{14}N_8$. Dipicrate of 1,2-dimethyl-4-methylamino-decahydroquinoline, preparation, 689.

$C_{24}H_{42}O_2Hg$. Orthotolylmercury stearate, synthesis, 114.

$C_{24}H_{42}O_{22}Ca$. Calcium salt of glucosido-3-mannoic acid, synthesis, oxidation, 175.

$C_{24}H_{42}O_{24}Ca$. Calcium salt of glucosido-2-galactonic acid, synthesis, properties, 170.

$C_{24}H_{42}O_{24}Ca$. Calcium salt of a bionic acid, preparation, 300; 306.

$C_{24}H_{52}O_4Ti$. n-Hexyl ester of orthotitanic acid, preparation, 630.

24. IV

$C_{24}H_{18}Hg_3H_2O_2$. Trimercurated derivative of resorcinol, 112.

$C_{24}H_{16}ONCl$. α-Naphthalide of diphenylchloroacetic acid, preparation, 760.

$C_{24}H_{21}O_6N_3S$. Methyltoluenesulfonate of 6-(4'-nitrobenzoylamino)-quinoline, preparation, properties, 1907.

$C_{24}H_{22}O_4N_2S$. Methyl-p-toluenesulfonate of 6-benzoylaminoquinoline, preparation, properties, action of NaOH, 1906.

$C_{24}H_{34}N_2Cl_6Pt$. Chloroplatinate of compound obtained from condensation of styrene oxide with ammonia, 2021.

$C_{24}H_{26}N_2S_2I_2$. Dimethiodide of α,ω-di-[4-phenylthiazolyl-(2)]-butane, preparation, 933.

$C_{24}H_{48}O_8N_4Br_2$. Product from condensation of 1,4-di-(α-bromo-nor-capryl)-2,5-diketopiperazine and ethyl glycocollate, 2222.

24. V

$C_{24}H_{21}N_2O_3SCl$. Methyl chloride of 6-(N-benzoyl)-p-toluenesulfonamido)-quinoline, preparation, 2062.

$C_{24}H_{21}N_2S_2F_6I$. Bis-[3-Ethyl-5-trifluoromethylbenzothiazole-(2)]-9-methyltrimethinecyanine iodide, preparation, absorption maximum, 2271.

$C_{24}H_{22}N_2SF_3I$. [3-Ethyl-5-trifluoromethylbenzothiazole-(2)][1-ethylquinoline-(2)]-trimethine cyanine iodide, preparation, absorption maximum, 2271.

Group $C_{25}$

25. I

$C_{25}H_{16}$. Pyrolysis product formed from product of reaction of magnesium-m-xylol with benzanthrone, (3-methyl-3,4,6,7-dibenzopyrene), 1739.

25. II

$C_{25}H_{30}N_2$. Product of condensation of diketone with o-phenylenediamine, preparation, 291.

$C_{25}H_{31}N_3$. Leucocrystal violet, absorption spectrum, 884.

$C_{25}H_{42}O_2$. 5,7-Dimethyl-4,8-diphenylundecadiene-1,10-diol-4,8, preparation, properties, oxidation, formation and analysis of Ag salt, 1849.

$C_{25}H_{34}O_{17}$. 1) Acetylated galactosido-2-d-arabinose, 301.

2) Heptaacetylmannosido-d-arabinose, preparation, 306.

25. III

$C_{25}H_{17}O_4P$. Pyrocatechol phenylxanthylphosphinic acid, preparation, properties, hydrolysis, 1526.

$C_{25}H_{19}ON$. 4,4-Diphenyl-2-oxo-5,6-benzotetrahydroquinoline, preparation, 1239; 4,4- — -2-oxo-7,8-benzotetrahydroquinoline, (4,4-diphenyl-α-naphthohydrocarbostyril), preparation, 1239.

$C_{25}H_{19}O_3P$. Pyrocatechol triphenylmethylphosphinic acid, preparation, properties, hydrolysis, 1524.

$C_{25}H_{21}O_4N$. α-Naphthalide of β,β-diphenyl-β-hydroxypropionic acid, preparation, properties, 1034; β- — of β,β-diphenyl-β-hydroxypropionic acid, preparation, properties, 1034.

$C_{25}H_{21}O_3P$. Diphenylbiphenylmethylphosphinic acid, preparation, 1526.

$C_{25}H_{31}ON_3$. Carbinol base of crystal violet, absorption spectrum, 886.

$C_{25}H_{32}O_4N_4$. Dinitrophenylhydrazone of 3,8-dimethyl-$\Delta^5$-dodecahydro-4,5,6,7-dibenzindan-1-one, preparation, 290; of 12b-methyl-$\Delta^{8a}$-hexadecahydrotriphenylen-1-one, preparation, 290.

$C_{25}H_{32}O_5N_4$. Dinitrophenylhydrazone of ketol, preparation, 293.

$C_{25}H_{39}O_7N$. Eldelidine, preparation, properties, formation of hydrochloride, nitrate, oxalate, hydriodide, methyl iodide, acetylation, oxidation, 1748.

25. IV

$C_{25}H_{22}O_6N_2S$. 2-p-Acetylaminophenylsulfonyl-(p'-acetylaminobenzoyl)-1-o-hydroxyphenylethylene, preparation, properties, 344.

$C_{25}H_{27}N_2IS_2$. 1) 3,3',6,7,6',7'-hexamethyl-9-ethyl-thiacarbocyanin iodide, preparation, properties, 943.

2) 3,4,5,3',4',5'-Hexamethyl-9-ethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 943.

$C_{25}H_{27}N_3O_3S_3$. 2-Methyl-6-(N-benzoylthiocarbamido-N')-benzothiazole ethyl-p-tolusulfonate, preparation, properties, absorption maximum, formation of ethiodide, 377.

$C_{25}H_{27}N_4IS_2$. 3,1'-Diethyl-6-(N-allylthiocarbamido-N')-thiaisocyanin iodide, preparation, properties, 381.

$C_{25}H_{29}N_2IS_2$. 1) 3,3'-Diethyl-4,6,4',6'-tetramethylthiacarbocyanin iodide, preparation, properties, 942.

2) 3,3'-Diethyl-6,7,6',7'-tetramethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942; 3,3'- — -5,6,5',6'-tetramethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942; 3,3'- — 5,7,5',7'-tetramethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942; 3,3'- — -4,7,4',7'-tetramethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942; 3,3'- — 4,5,4',5'-tetramethylthiacarbocyanin, preparation, properties, absorption maximum, 942.

2) 3,6,7,3',6',7'-Hexamethyl-9-ethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942; 3,5,7,3',5',7'- -9-ethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942; 3,5,6,3',5',6'- - -9-ethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942; 3,4,6,3',4',6'- - -9-ethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942.

$C_{25}H_{34}O_4N_4S$. 2,4-Dinitrophenylhydrazone of steroid ketone, formation, 1036.

25. V

$C_{25}H_{20}O_6N_2SBr_2$. 2-p-Acetylaminophenylsulfonyl-2-(p'-acetylaminobenzoyl)-1-o-hydroxy-m,m-dibromophenylethylene, preparation, properties, 344.

$C_{25}H_{21}N_2S_2F_6I$. Bis-[3-Ethyl-5-trifluoromethylbenzthiazole-(2)]-pentamethinecyanine iodide, preparation, absorption maximum, 2271.

$C_{25}H_{23}N_2S_2F_6I$. Bis-[3-Ethyl-5-trifluoromethylbenzothiazole-(2)]-9-ethyltrimethinecyanin iodide, preparation, absorption maximum, 2271.

Group $C_{26}$

26. I

$C_{26}H_{18}$ 1) Pyrolysis product of 4-mesityl-1,9-benzanthrone-10, formation, picrate, 1738.

2) 1',3'-Dimethyl-3,4,6,7-dibenzopyrene, preparation, properties, 1738.

$C_{26}H_{22}$. Tetraphenylethane, preparation, 1402.

26. II

$C_{26}H_{20}N_2$. 1) Ketazine, preparation, hydrolysis, 1401.

2) Product of reaction of diphenyldiazomethane and allyl acetate, 1402.

$C_{26}H_{20}O$. 1) 4-Mesityl-1,9-benzanthrone-9, preparation, pyrolysis, 1738.

2) Product of reaction of magnesium bromomesitylene with 1,9-benzanthrone-10, 1738.

$C_{26}H_{22}N_2$. Product of reaction of diphenyldiazomethane and allyl acetate, 1402.

$C_{26}H_{26}Si$. α-Naphthyl-di-p-tolylethylsilane, preparation, properties, 1168.

26. III

$C_{26}H_{21}O_3N$. 3,3-Bis-(2-methoxyphenyl)-4,5-benzoxindole, [3,3-bis-(2-methoxyphenyl)-β-naphthoxindole], preparation, properties, 240; - -(2-methoxyphenyl)-6,7-benzooxindole, [3.3-bis-2-methoxyphenyl)-α-naphthoxindole], preparation, properties, 240; - -(4-methoxyphenyl)-4,5-benzooxindole, [3,3-Bis-(4-methoxyphenyl)-β-naphthoxindole], preparation, properties, 363; - -(4-methoxyphenyl)-6,7-benzooxindole [3,3-bis-(4-methoxyphenyl-α-naphthoxindole], preparation, properties, 363.

$C_{26}H_{21}O_4N_3$. N-di-(ethylphthalimide)-aniline, preparation, 326.

$C_{26}H_{23}N_5O_8$. Picrate of dihydrolepidine oxide, formation, 2127.

$C_{26}H_{23}O_4N$. 1) 2,2'-Dimethoxybenzil-β-naphthalide, preparation, properties, 239; 2,2'- - -α-naphthalide, preparation, properties, 239.

2) α-Naphthalide of 4,4'-dimethoxybenzilic acid, preparation, properties, 361; β- - of 4,4'-dimethoxybenzilic acid, preparation, properties, 362.

$C_{26}H_{25}O_7N_5$. Picrate of dimer of dihydrolepidine, formation, 1302.

$C_{26}H_{26}OSi$. α-Naphthyl-di-p-tolylmonoethoxysilane, preparation, properties, 1168.

$C_{26}H_{28}O_3N_4$. Condensation product of carbobenzoxyalanyl chloride and diketopiperazine, formation (N,N'-dicarbobenzoxyalanyldiketopiperazine), 2216.

26. IV

$C_{26}H_{20}O_2N_2Cl_2$. 1,1-Dichloro-bis-p,p'-(salicylideneaminophenyl)-ethylene, preparation, properties, 1013.

$C_{26}H_{30}S_2N_2I_2$. Diethiodide of α,ω-di-[4-phenylthiazolyl-(2))]-butane, preparation, 933.

$C_{26}H_{31}N_2S_2I$. 1)3,3-Diethyl-4,6,4',6',9'-pentamethylthiacarbocyanin iodide, preparation, properties, 942.

2) 3,3'-Diethyl-4,5,4',5',9'-pentamethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942; - -5,6,5',6',9-pentamethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942; - -4,7,4',7',-9-pentamethylthiacarbo cyanin iodide, preparation, properties, absorption maximum, 942; - -5,7,5',7',9-pentamethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942; - -6,7,6',7',9-pentamethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942.

26. VI

$C_{26}H_{35}O_{16}N_2Cl_3S_2Na$. 1,1,1-Trichlorobis-p,p'-(sodium salt of glucose sulfonate aminophenyl)-ethane, preparation, properties, 1012.

Group $C_{27}$

27. I

$C_{27}H_{16}$. 1) Pyrolysis product formed from product obtained by reacting 2-magnesiumbromotetralin with benzanthrone, 1739.

2) 3,4,5,6,7-Tribenzopyrene, preparation, properties, 1739.

$C_{27}H_{18}$. 1) 3-Methyl-4',5-ethylene-3,4,6,7-dibenzopyrene, preparation, properties, 1737.

2) Pyrolysis product formed from product obtained by reacting 4-magnesium bromo-7-methylindane and 1,9-benzanthrone-10, 1737.

$C_{27}H_{20}$. 1) 2'-Isopropyl-3,4,6,7-dibenzpyrene, preparation, properties, 1738.

2) Pyrolysis product of 4-(paracymene)-1,9-benzanthrone-10, 1738.

27. II

$C_{27}H_{12}O_3$. Transformation product of 2-chloro-3-hydroxy-1,4-naphthoquinone, preparation, properties, 747.

$C_{27}H_{18}N_2$. Phenylhydrazone of bornyl-α-naphthyl ketone, formation, 1414.

27. III

$C_{27}H_{21}O_3N_3$. Trimesinic trianilide, preparation, properties, 1655.

$C_{27}H_{41}O_7N$. Eldeline, isolation, formation of hydrochloride, nitrate, perchlorate, hydriodide, oxalate, chloroaurate, reaction with methyl iodide, acetylation, saponification, 1747.

27. IV

$C_{27}H_{31}O_3N_3S_3$. 2-Methyl-6-(N-benzyl-S-ethylisothiocarbamido-N')-benzothiazole ethyl-p-toluenesulfonate, preparation, properties, 378.

$C_{27}H_{33}N_2S_2I$. 3,3',9-Triethyl-4,5,4',5'-tetramethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942; 3,3',9--4,7,4',7',-tetramethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942; 3,3',9--5,6,5',6'-tetramethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942; 3,3'9-5,7,5',7',-tetramethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942; 3,3'9-6,7,6',7'-tetramethylthiacarbocyanin iodide, preparation, properties, absorption maximum, 942.

27. V

$C_{27}H_{23}N_2S_2F_6I$. Bis-[3-Ethyl-5-trifluoromethylbenzothiazole-(2)]-heptamethinecyanin iodide, preparation, absorption maximum, 2271.

$C_{27}H_{31}O_4N_4S_2Cl$. 3,1'-Diethyl-6-(N-allyl-8-ethylisothiocarbamido-N')-thiaisocyanin perchlorate, preparation, properties, 381.

Group $C_{28}$

28. II

$C_{28}H_{12}O_2$. Ethylidene γ-ketol, preparation, 1608.

$C_{28}H_{20}O$. Diphenylphenylacetylenelybenzoylmethane (1,2,2,4-tetraphenylbutyn-3-one-1), preparation, properties, oxidation, 1607.

$C_{28}H_{22}O_2$. 1) 1,1,2,4-Tetraphenylbuten-2-ol-1-one-4, formation, properties, transformations, 1606.

2) Triphenylphenylacetylenylethylene glycol (1,1,2,4-tetraphenylbutyn-3-diol-1,2), preparation, properties, action of sulfuric acid, 1606.

$C_{28}H_{28}Si$. Tetrabenzylsilane, preparation, 1163.

$C_{28}H_{32}Si$. α-Naphthyl-di-p-ditolyl-butylsilane, preparation, properties, 1168.

$C_{28}H_{34}O_{19}$. 1) Octaacetate of galactosido-3-glucose, isomerization, 300.

2) Octaacetate of glucosido-2-galactose, synthesis, properties, 169.

3) Octaacetate of glucosido-3-glucose, 174.

4) Octaacetylmannosido-2-mannose, preparation, 305.

28. III

$C_{28}H_{22}O_{10}N_6$. 1,4-Diphthalylglycylglycyl-2,5-diketopiperazine, preparation, properties, structure, 2214.

28. IV

$C_{28}H_{26}O_2N_2Cl_2$. 1,1-Dichloro-bis-p,p'-(salicylideneaminophenyl)-ethylene, preparation, solubility, 1013.

$C_{28}H_{22}N_2S_4I_2$. Bis-(benzthiazolyl-(2)-methyl)-disulfide diiodophenylate, preparation, 777.

$C_{28}H_{22}N_2S_3I_2$. Bis-[benzothiazolyl-(2)-methyl]sulfide diiodophenylate, preparation, 777.

$C_{28}H_{22}O_5N_2S$. Schiff base of p-aminophenyl-p'-aminophenacyl sulfone and salicylaldehyde, preparation, properties, 341.

$C_{28}H_{22}O_6N_2S$. Pyridine salt of S,N-di-(2-phenyl-5-oxazolonylmethylen-4)-cysteine, preparation, solubility, action of HCl, ammonia, 2255.

28. V

$C_{28}H_{22}ON_2S_2I_2$. Bis-[benzothiazolyl-(2)-methyl] oxide diiodophenylate, preparation, 778.

Group $C_{29}$

29. II

$C_{29}H_{26}O$. Tetracyclone, reaction with vinyl compounds, 1496.

29. III

$C_{29}H_{26}O_{14}N_6$. Picrate of 1,4-diphenyl-1,3-cyclopentadiene, formation, 1430.

$C_{29}H_{21}O_3P$. Pyrocatechol diphenyl-α-naphthylmethylphosphinic acid, preparation, hydrolysis, 1526.

$C_{29}H_{28}O_3N_4$. Diantipyrylphenylcarbinol, ionization, 779.

$C_{29}H_{40}O_4N_2$. 1) 4',5'-Dimethoxy-6-ethyl-7-(1''-methyl-6'',7''-dimethoxy-1'',2'',3'',4''-tetrahydroisoquinolyl)-3,4,5,6,7,8-hexahydro-1,2:1',2'-benzoquinolizine-emetine base, preparation, properties, 1516.

2) Emetine, synthesis, solubility, formation of hydrochloride, 1518.

3) Natural emetine, 1519.

$C_{29}H_{40}O_6N_2$. β''-(3'',4''-Dimethoxyphenyl)-ethylamide of N-[β'-(3',4'-dimethoxyphenyl)-ethyl-δ-ethyl-α-piperidone-γ-acetic acid, preparation, properties, reaction with toluene and $POCl_3$, 1516.

$C_{29}H_{43}O_9N$. Acetyleldeline, preparation, properties, formation of hydrochloride saponification, 1748, 1749.

$C_{29}H_{43}O_{12}N$. Eldeline oxalate, preparation, properties, 1747.

29. IV

$C_{29}H_{29}N_4S_2I$. 3,1'-Diethyl-6-(N-benzylthiocarbamido-N')-thiaisocyanin iodide, preparation, properties, 381.

$C_{29}H_{33}O_4N_2I$. Rubremetine iodide, formation, 1517.

$C_{29}H_{38}O_4N_2I_2$. Hydriodide of 4',5'-dimethoxy-6-ethyl-7-(1''-methyl-6'',7''-dimethoxy-3'',4''-dihydroisoquinolyl)-3,4,5,6,7,8-hexahydro-9,10-dehydro-(1',2':1,2)-benzoquinolizine , preparation, properties, 1516.

29. V

$C_{29}H_{19}ON_2S_2I$. 3,3'-Diphenyl-8,10-epoxythiacarbocyanin iodide, preparation, 778.

Group $C_{30}$

30. I

$C_{30}H_{48}$. Hexacyclopentene, preparation, properties, viscosity, 1585.

30. II

$C_{30}H_{21}P$. Tri-(α-Naphthyl)-phosphine, preparation, 857.

30. III

$C_{30}H_{21}OP$. Tri-(α-naphthyl)-phosphine, oxide, preparation, 858.

$C_{30}H_{24}BrP$. Triphenyl-4-diphenylphosphonium bromide, preparation, properties, solubility, 2113.

$C_{30}H_{24}ClP$. Triphenyl-4-biphenylphosphonium chloride, preparation, properties, solubility, 2114.

30. IV

$C_{30}H_{26}O_4N_2Cl_2$. 1,1-Dichloro-bis-p,p'-(phthalidylaminophenyl)-ethylene, preparation, solubility, 1013.

$C_{30}H_{21}N_2Cl_3O_4$. 1,1,1-Trichloro-bis-p,p'-(phthalidylaminophenyl)-ethane, preparation, solubility, 1011.

$C_{30}H_{34}O_2N_2S_4$. Product of reaction of alcoholic KOH on 3-ethyl-5-(3'-ethylbenzothiazolinyliden-2'-ethylidene)-thiazolidinedione-(2,4), formation, properties, 1277.

$C_{30}H_{38}N_2S_2I_2$. Di-n-butiodide of α,ω-di-[4-phenylthiazolyl-(2)]-butane, preparation, 933.

$C_{30}H_{42}O_2N_2S$. Tetradecylobetaine of 6-(p-tolylsulfonamide)-quinoline, preparation, properties, 1906.

30. V

$C_{30}H_{27}O_6N_2S_2Cl_3$. 1,1,1-Trichloro-bis-p,p'-(acetaminophenylsulfonamidophenyl)-ethane, preparation, solubility, 1012.

$C_{30}H_{45}O_2N_2SBr$. Tetradecyl bromide of 6-(p-tolylsulfonamido)-quinoline, preparation, action of KOH, 1906.

Group $C_{31}$

31. II

$C_{31}H_{34}O_3$. Anisylcyclone, reaction with vinyl ethers, 1495.

31. III

$C_{31}H_{29}O_3P$. 1) Phenyldi-(biphenyl)-methyl phosphinic acid, preparation, 1526.

2) Pyrocatechyl diphenylbiphenylmethylphosphinic acid, preparation, properties, hydrolysis, 1526.

31. IV

$C_{31}H_{33}N_4S_2I$. 3,1'-Diethyl-6-(N-benzyl-S-ethylisothiocarbamido-N')-thiaisocyanin iodide, preparation, properties, 381.

Group $C_{32}$

32. II

$C_{32}H_{26}O_2$. Reaction product of vinyl n-butyl ether and anisylcyclone,(1,4-diphenyl-2,3-di-(p-methoxyphenyl)-benzene), 1495.

32. III

$C_{32}H_{34}O_{12}N_6$. Condensation product of N,N'-diphthalylglycyldiketopiperazine and glycocoll, formation, properties, structure, 2220.

$C_{32}H_{58}O_4Pb$. Lead salt of $\Delta^{2,3}$-hexadecenoic acid, formation, 2039.

$C_{32}H_{68}O_4Ti$. n-Octyl ester of orthotitanic acid, preparation, 630.

Group $C_{33}$

33. IV

$C_{33}H_{41}O_4S_4Cl$. 3,3'-Diethyl-6,6'-di-(N-ally-S-ethylisothiocarbamido-N')-thiacarbocyanin perchlorate, preparation, properties, 380.

Group $C_{34}$

34. I

$C_{34}H_{22}$. Reaction product of ω-bromostyrene and acecyclone, 1497.

34. IV

$C_{34}H_{28}O_8N_2Cl_2$. 1,1-Dichloro-bis-p,p'-(meconylaminophenyl)-ethylene, preparation, 1013.

$C_{34}H_{29}N_2O_8Cl_3$. 1,1,1-Trichloro-bis-p,p'-(meconylaminophenyl)-ethane, preparation, solubility, 1011.

34. V

$C_{34}H_{43}O_4N_2S_4Cl$. 3,3'-Diethyl-6,6'-di-(N-allyl-S-ethylisothiocarbamido-N')-9-methylthiacarbocyanin perchlorate, preparation, properties, 380.

$C_{34}H_{71}O_3N_4PBr_4$. Product of reaction of triethylphosphite on N-(β-bromoethyl)-piperidine, formation, hydrolysis, 1248.

Group $C_{35}$

35. V

$C_{35}H_{45}O_4N_2S_4Cl$. 3,3'-Diethyl-6,6'-di-(N-allyl-S-ethylisothiocarbamido-N,)-thiadicarbocyanin perchlorate, preparation, properties, 381.

$C_{35}H_{45}O_4N_2S_4Cl$. 3,3',9-Triethyl-6,6'-di-(N-allyl-S-ethylisothiocarbamido-N')-thiacarbocyanin perchlorate, preparation, properties, 380.

Group $C_{36}$

36. I

$C_{36}H_{26}$. Pentaphenylbenzene, preparation, 1496.

36. III

$C_{36}H_{76}O_4Ti$. n-Nonyl ester of orthotitanic acid, preparation, 630.

36. IV

$C_{36}H_{46}O_3N_2S_5$. 3,3'-Diethyl-6,6'-di-(N-allylthiocarbamido-N')-thiacarbocyanin p-toluene sulfonate, preparation, properties, 380.

Group $C_{37}$

37. III

$C_{37}H_{27}O_3P$. Pyrocatechyl phenyldi-(biphenyl)methylphosphinic acid, preparation, properties, hydrolysis, 1526.

$C_{37}H_{56}O_{10}N_2$. Delsemidine, isolation, properties, formation of hydroiodide, perchlorate, saponification, 1504.

37. V

$C_{37}H_{45}O_4N_2S_4Cl$. 3,3'-Diethyl-6,6'-di-(N-allyl-S-ethylisothiocarbamido-N')-thiatricarbocyanin perchlorate, preparation, properties, 381.

Group $C_{38}$

38. I

$C_{38}H_{38}$. Hexaphenylethane, dissociation, 1027.

38. II

$C_{38}H_{36}O_2$. Reaction product of ω-nitrostyrene and anisylcyclone, 1497.

38. III

$C_{38}H_{28}O_2N_4$. Diphthalylphenylalanyl-2,5-diketopiperazine, preparation, properties, structure, 2213.

$C_{38}H_{36}O_2N_4$. Tetraphenyldibenzoyltetrazine, dissociation, 1027.

38. IV

$C_{38}H_{39}N_4OCl_3$. 1,1,1-Trichloro-bis-p,p'-(cotarnylideneaminophenyl)-ethane, preparation, solubility, 1011.

$C_{38}H_{46}O_6N_2S_4$. Product of reaction of methyl p-toluenesulfonate and α,ω-di-[4-phenylthiazolyl-(2)]-butane, 933.

$C_{38}H_{45}O_3N_2S_5$. 3,3'-Diethyl-6,6'-di-(N-allylthiocarbamido-N')-thiadicarbocyanin-p-toluenesulfonate, preparation, properties, 381.

Group $C_{40}$

40. IV

$C_{40}H_{44}O_3N_2S_5$. 3,3'-Diethyl-6,6'-di-(N-allylthiocarbamido-N')-thiatricarbocyanin-p-toluene sulfonate, preparation, properties, 381.

Group $C_{42}$

42. II

$C_{42}H_{27}P$. Tri-(9-anthryl)-phosphine, preparation, 857; —-(9-phenanthryl)-phosphine, preparation, 857.

42. III

$C_{42}H_{24}Br_3P$. Tri-(9-bromoanthryl-10)-phosphine, preparation, 857.

$C_{42}H_{27}PO$. Tri-(9-phenanthryl)-phosphine oxide, preparation, 858.

42. IV

$C_{42}H_{47}N_2S_4I$. 3,3'-Diethyl-6,6'-di-(N-benzyl-S-ethylisothiocarbamido-N')-9-methylthiacarbocyanin iodide, preparation, properties, 380.

Group $C_{43}$

43. IV

$C_{43}H_{49}N_2S_4I$. 3,3',9-Triethyl-6,6'-di-(N-benzyl-S-ethylisothiocarbamido-N')-thiacarbocyanin iodide, preparation, properties, 380.

Group $C_{44}$

44. III

$C_{44}H_{34}O_4Pb$. Lead salt of $\Delta^{2,3}$-docosenoic acid, formation, 2043.

44. IV

$C_{44}H_{44}O_3N_2S_5$. 3,3'-Diethyl-6,6'-di-(N-benzyl-thiocarbamido-N')-thiacarbocyanin-p-toluenesulfonate, preparation, properties, 380.

$C_{44}H_{62}O_{10}N_2S_2$. Salt formed from γ-diethylaminopropyl ether of 2-methoxy-6-allylphenol and the 1,5-disulfoacid of naphthalene, 1690.

Group $C_{46}$

46. IV.

$C_{46}H_{48}O_3N_2S_5$. 3,3',9-Triethyl-6,6'-di-(N-benzylthiocarbamido-N')-thiacarbocyanin p-toluenesulfonate, preparation, properties, 381.

Group $C_{48}$

$C_{48}H_{48}O_3N_2S_5$. 3,3'-Diethyl-6,6'-di-(N-benzylthiocarbamido-N')-thiatricarbocyanin p-toluene-

sulfonate, preparation, properties, 381.

$C_{48}H_{52}O_3N_6S_5$. 3,3'-Diethyl-6,6'-di-(N-benzyl-S-ethylisothiocarbamido-N')-thiacarbocyanin-p-toluene sulfonate, preparation, properties, 380.

Group $C_{49}$

49. IV

$C_{49}H_{72}O_{12}N_2S_2$. Camphor-β-sulfonate of natural l-emetine, formation, 1518; —-sulfonate of synthetic emetine, 1518.

Group $C_{50}$

50. IV

$C_{50}H_{54}O_3N_6S_5$. 3,3'-Diethyl-6,6'-di-(N-benzyl-S-ethylisothiocarbamido-N')-thiadicarbocyanin-p-toluene sulfonate, preparation, properties, 381.

Group $C_{52}$

52. IV

$C_{52}H_{56}O_3N_6S_5$. 3,3'-Diethyl-6,6'-di-(N-benzyl-S-ethylisothiocarbamido-N')-thiatricarbocyanin p-toluene sulfonate, preparation, properties, 381.

Group $C_{54}$

54. II

$C_{54}H_{33}P$. Tri(1,2-benzanthryl)-phosphine, preparation, 857.

54. III

$C_{54}H_{33}PO$. Tri-(1,2-benzanthryl)-phosphine oxide, preparation, 858.

Group $C_{60}$

60. IV

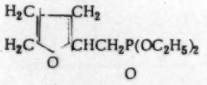
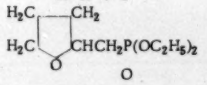
$C_{60}H_{48}P_2SO_4$. Triphenyl-4-biphenylphosphonium sulfate, preparation, properties, solubility, 2114.

Group $C_{72}$

72. II

$C_{72}H_{60}O_3$. Product of reaction of 2,5-diphenylhexyne-3-diol-2,5-with phenol, 1885.

# ERRATUM

| Page | Line No. | Reads | Should read |
|---|---|---|---|
| 111 | bottom line | $(C_6H_5Hg)_2C_6H(OH)Cl_2$ | $(C_6H_5Hg)_2C_6H(OH)Cl_3$ |
| 111 | 11 from bottom | 2,4-trichlorophenol | 2,4,6-trichlorophenol |
| 198 | 17 from top | $C_{15}H_{19}O_2Cl$ | $C_{15}H_9O_2Cl$ |
| 312 | bottom line | $C_8H_{12}H_8P_2Na_2$ | $C_8H_{12}O_8P_2Na_2$ |
| 381 | Table 3, formula | $C_{33}H_{42}P_3N_6S_5$ | $C_{33}H_{42}O_3N_6S_5$ |
| 528 | 15 from bottom | $C_7H_{13}O_4P$ | $C_9H_{13}O_4P$ |
| 795 | Title and elsewhere in paper | Halide | Halogen |
| 839 | bottom line | $C_6H_{12}O$ | $C_7H_{12}O$ |
| 953 | bottom line | $C_{16}H_{14}Br$ | $C_{16}H_{14}Br_4$ |
| 1003 | 2 from top | acetic anhydride | acetaldehyde |
| 1131 | 4 from top | para molybdate | trimolybdate |
| 1168 | 6 from bottom | $C_{29}H_{26}Si$ | $C_{25}H_{26}Si$ |
| 1232 | 21 from bottom | $C_{20}H_{12}O_4N_2$ | $C_{29}H_{12}O_4N_4$ |
| 1243 | Table, 3rd formula from top |  |  |
| 1245 | 18 from bottom | $C_{16}H_{21}H_5P$ | $C_{16}H_{21}O_5P$ |
| 1246 | 14 from top | $C_5H_{23}O_6P$ | $C_{15}H_{23}O_6P$ |
| 1442 | Table, column 6, line 2 | [10] | [4,11] |
| | column 6, line 3 | [4,11] | Our data |
| 1484 | 22 from top | $C_{19}H_{17}O_2NaHSO_3 \cdot 1\frac{1}{2}\ H_2O$ | $C_{19}H_{14}O_2NaHSO_3 \cdot 1\frac{1}{2}\ H_2O$ |
| 1561 | Formula | $CH_2Cl=CClBr-CHBr-CH_2OR$ | $CH_2Cl-CClBr-CHBr-CH_2OR$ |
| 1579 | 20 from bottom | $CH_3CClPO(OH)_2$ | $CH_3CHClPO(OH)_2$ |
| 1585 | 19 from bottom | 2.530 g | 2.530 mg |
| 1632 | 10 from bottom | (1940) | (1908) |
| 1707 | 18 from top | semicarbazone | thiosemicarbazone |
| 1711 | 3 from bottom | $C_7H_{15}N$ | $C_7H_{15}ON$ |
| 1802 | 3 from bottom | Rikovcki | Rikorski |
| 1828 | 19 from bottom | 21.32 benzene | 21.32 g benzene |
| 1838 | 17 from top | 47.52 | calculated 47.52 |
| 1838 | 10 from bottom | 1.133 ml<br>0.615 ml | 1.133 ml $N_2$<br>0.615 ml $N_2$ |
| 1911 | 20 from top | invariable presence | gradual change |

## ERRATUM - INDEX

In the empirical formulas section of this index, the following compounds have inadvertently been placed under the wrong headings:

| Compound | See under: |
|---|---|
| $C_9H_{16}$ | $C_9$. II |
| $C_9H_{18}$ | $C_9$. II |
| $C_9H_{14}O$ | $C_9$. III |
| $C_{10}H_{18}$ | $C_{10}$. II |
| $C_{11}H_{20}$ | $C_{10}$. II |
| $C_{11}H_{12}O$ | $C_{11}$. IV |
| $C_{12}H_{22}$ | $C_{12}$. II |
| $C_{12}H_{18}O_2$ | $C_{12}$. IV |
| $C_{14}H_{22}O$ | $C_{14}$. III |